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The EPA Administrator signed the following proposed rule on April 15, 2003. It is being submitted for publication in the *Federal Register*. While EPA has taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of public comment. Please refer to the official version in a forthcoming *Federal Register* publication and on GPO's Web Site. The rule will likely be published in the *Federal Register* by the end of May 2003. You can access the *Federal Register* at: [http://www.access.gpo.gov/su\\_docs/aces/aces140.html](http://www.access.gpo.gov/su_docs/aces/aces140.html). When using this site, note that "text" files may be incomplete because they don't include graphics. Instead, select "Adobe Portable Document File" (PDF) files.

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For the reasons set forth in the preamble, we amend parts 69, 80, 89, 1039, 1065, and 1068 of title 40 of the Code of Federal Regulations to read as follows:

## PART 69— SPECIAL EXEMPTIONS FROM THE REQUIREMENTS OF THE CLEAN AIR ACT

1. The authority citation for part 69 is revised to read as follows:

**Authority:** 42 U.S.C. 7545(c), (g) and (i), and 7625–1.

### Subpart E— [Amended]

2. Section 69.51 is revised to read as follows:

#### **§ 69.51 Motor vehicle diesel fuel.**

(a) Diesel fuel that is designated for use only in Alaska and is used only in Alaska, is exempt from the sulfur standard of 40 CFR 80.29(a)(1) and the dye provisions of 40 CFR 80.29(a)(3) and 40 CFR 80.29(b) until the implementation dates of 40 CFR 80.500, provided that:

- (1) The fuel is segregated from nonexempt diesel fuel from the point of such designation; and
- (2) On each occasion that any person transfers custody or title to the fuel, except when it is dispensed at a retail outlet or wholesale purchaser-consumer facility, the transferor must provide to the transferee a product transfer document stating:

This diesel fuel is for use only in Alaska. It is exempt from the federal low sulfur standards applicable to highway diesel fuel and red dye requirements applicable to non-highway diesel fuel only if it is used in Alaska.

(b) Beginning on the implementation dates in 40 CFR 80.500, motor vehicle diesel fuel that is designated for use in Alaska or is used in Alaska, is subject to the applicable provisions of 40 CFR Part 80, Subpart I, except the language of product transfer documents under 40 CFR 80.590 and pump dispenser labels under 40 CFR 80.570(a) and (b) may be modified, as applicable, to reflect the fact that certain motor vehicle and non-motor vehicle diesel fuels or heating oil that would otherwise be required to be segregated due to the red dye requirement for non-motor vehicle fuels under 80.510(c) and 80.520(b)(2) are permitted to be comingled, distributed and dispensed as one fuel, due to the exemption from the red dye requirement under 40 CFR 69.52(b) and (c), if they meet the same sulfur and cetane and/or aromatics standards as the motor vehicle diesel fuel.

(c) The Governor of Alaska may submit for EPA approval, by April 1, 2002, a plan for implementing the motor vehicle sulfur standard in Alaska as an alternative to the temporary compliance option provided under §§ 80.530–80.532. If EPA approves an alternative plan, the provisions as approved by EPA under that plan shall apply to the diesel fuel subject to this

paragraph (b).

3. A new section 69.52 is added to read as follows:

**§ 69.52 Non-motor vehicle diesel fuel.**

(a) Definitions

“Areas accessible by the Federal Aid Highway System” are the geographical areas of Alaska designated by the State of Alaska as being accessible by the Federal Aid Highway System.

“Areas not accessible by the Federal Aid Highway System” are all other geographical areas of Alaska. “Nonroad, locomotive, or marine diesel fuel,” shall have the same meaning as provided in 40 CFR 80.2.

(b) Non-motor vehicle diesel fuel and heating oil that is used or intended for use in areas of Alaska accessible by the Federal Aid Highway System is subject to the provisions of 40 CFR Part 80, Subpart I, except:

(1) The fuel is exempt from the red dye requirements, and the presumptions associated with the red dye requirements, under 80.510(c) and 80.520(b)(2). Exempt fuel under this paragraph must be segregated from motor vehicle diesel fuel, unless it meets the same sulfur standard and applicable cetane and/or aromatics standards as the motor vehicle diesel fuel and it is not marked by yellow solvent 124 under 80.510 and 80.511.

(2) The language of product transfer documents under 40 CFR 80.590 and pump dispenser labels under 40 CFR 80.570-573 may be modified, as applicable, to reflect the fact that (i) the fuel is exempt from the red dye requirement under paragraph (b) (1) of this section, and (ii) that the exempt fuel that would otherwise be required to be segregated from motor vehicle diesel fuel is permitted to be comingled, distributed and dispensed with the motor vehicle fuel if it meets the same sulfur standard and applicable cetane and/or aromatics standards as the motor vehicle fuel and is not marked by yellow solvent 124 under 80.510 and 80.511. Further, the following language shall be added to the product transfer documents: "Exempt from red dye requirement applicable to diesel fuel for non-highway purposes if it is used only in Alaska."

(3) For purposes of calculating a non-highway baseline percentage under 40 CFR 80.533, Alaska refiners and importers: (i) must declare under 40 CFR 80.533(c)(i)(C), as applicable, that the fuel was exempt under 69.52 from the dye provisions and did not meet the definition of motor vehicle diesel fuel; and (ii) as an alternative to the submission of batch data for the baseline period under 40 CFR 80.533(c), may assume 30 percent for the non-highway baseline percentage.

(c) Non-motor vehicle diesel fuel and heating oil that is designated for use only in areas of Alaska not accessible by the Federal Aid Highway System, or is used only in areas of Alaska not accessible by the Federal Aid Highway System, is excluded from the applicable provisions of 40 CFR Part 80, Subpart I; except that

(1) All model year 2011 and later nonroad diesel engines and equipment must be fueled only with diesel fuel that meets the specifications of 80.510(b) must be fueled only with diesel fuel that meets the specifications of 80.510(b), and the product transfer document requirements under 40 CFR 80.590 and pump dispenser labels under 40 CFR 80.570-573, except that,

(i) the language of product transfer documents under 40 CFR 80.590 and pump dispenser labels under 40 CFR 80.570-573 may be modified, as applicable, to reflect the fact that the fuel is undyed and unmarked, and that diesel fuel for motor vehicles, nonroad equipment, locomotive or marine engines, and heating oil that meet the same sulfur, cetane and/or aromatics standards that

would otherwise be required to be segregated are permitted to be comingled, distributed and dispensed as one fuel under this section (c), and (ii) the following language shall be added to the product transfer documents: "Exempt from red dye requirement applicable to diesel fuel for non-highway purposes if it is used only in Alaska."

(2) Diesel fuel that is exempt under this section, except when paragraph (c)(1) of this section applies, must meet the requirements for product transfer documents under 40 CFR 80.590, except the following language shall be substituted for the language specified under (a)(5) of that section:

(i) until August 31, 2010

This diesel fuel is for use only in those areas of Alaska not accessible by the Federal Aid Highway System. It is exempt from the federal sulfur standards applicable to highway, nonroad, locomotive and marine diesel fuel, and the red dye requirements applicable to non-highway diesel fuel. It may not be used in model year 2007 and newer highway vehicles.

(ii) after August 31, 2010

This diesel fuel is for use only in those areas of Alaska not accessible by the Federal Aid Highway System. It is exempt from the federal sulfur standards applicable to highway, nonroad, locomotive and marine diesel fuel, and the red dye requirements applicable to non-highway diesel fuel. It may not be used in model year 2007 and newer highway vehicles or in model year 2011 and newer nonroad equipment.

(3) Diesel fuel that is exempt under this section, except when paragraphs (c)(1) or (c)(2) of this section apply, must meet the labeling requirements under §§ 80.570–80.573, except the following language shall be substituted for the language on the labels (i) until August 31, 2010:

**HIGH-SULFUR DIESEL FUEL**

**(May Exceed 500 ppm)**

**WARNING**

Federal Law *Prohibits* Use in Model Year 2007 and Newer Highway Vehicles.

(ii) after August 31, 2010

**HIGH-SULFUR DIESEL FUEL**

**(May Exceed 500 ppm)**

**WARNING**

Federal Law *Prohibits* Use in Any Highway Vehicle or in Any Model Year 2011 and Newer Nonroad Engine.

**PART 80—REGULATION OF FUELS AND FUEL ADDITIVES**

4. The authority citation for part 80 continues to read as follows:

Authority: 42 U.S.C. 7414, 7545 and 7601(a).

5. Section 80.2 is amended by revising paragraphs (f), (j), (o), (x), (y), (nn), (xx), and (zz) and adding paragraphs (aaa) through (ooo) to read as follows:

**§80.2 Definitions**

\* \* \* \* \*

(f) Previously certified diesel fuel or PCD means diesel fuel that previously has been included by a refiner or importer in a batch for purposes of complying with the standards and requirements of subpart I.

\* \* \* \* \*

(j) Retail outlet means any establishment, whether stationary or mobile, at which gasoline, diesel fuel, methanol, natural gas or liquified petroleum gas is sold or offered for sale for use in motor vehicles, nonroad engines, locomotive engines or marine engines.

\* \* \* \* \*

(o) Wholesale purchaser-consumer means any organization that is an ultimate consumer of gasoline, diesel fuel, methanol, natural gas, or liquified petroleum gas and which purchases or obtains gasoline, diesel fuel, natural gas or liquified petroleum gas from a supplier for use in motor vehicles, nonroad engines, locomotive engines or marine engines and, in the case of gasoline, diesel fuel, methanol or liquified petroleum gas, receives delivery of that product into a storage tank of at least 550-gallon capacity substantially under the control of that organization.

\* \* \* \* \*

(x) Diesel fuel means any fuel sold in any state or Territory of the United States and suitable for use in diesel engines, and which is commonly or commercially known or sold as number 1 or number 2 diesel fuel, or any distillate or nondistillate fuel that has comparable physical or chemical properties.

\* \* \* \* \*

(nn) Batch of diesel fuel means a quantity of diesel fuel which is homogeneous with regard to those properties that are specified for motor vehicle, nonroad, locomotive or marine diesel fuel under subpart I of this part.

\* \* \* \* \*

(xx) Diesel fuel additive means any substance not composed solely of carbon and/or hydrogen, or of diesel blendstocks, that is added, intended for adding, used, or offered for use in motor vehicle diesel fuel or NRLM diesel fuel subsequent to the production of diesel fuel by processing crude oil from refinery processing units, or in diesel motor vehicle or NRLM fuel systems.

\*\*\*\*\*

(zz) [Reserved]

(aaa) [Reserved]

(bbb) Nonroad (NR) diesel fuel means any diesel fuel, or any distillate product, that is used, intended for use, or made available for use, as a fuel in land based diesel engines subject to the provisions of either 40 CFR Part 89 or Part 1039.

(ccc) Locomotive and marine (LM) diesel fuel means any diesel fuel, or any distillate product,

that is used, intended for use, or made available for use, as a fuel in diesel engines subject to the provisions of either 40 CFR Part 92 or Part 94, or marine diesel engines subject to the provisions of Part 89.

(ddd) Nonroad, locomotive, and marine (NRLM) diesel fuel means any diesel fuel, or any distillate product, that is used, intended for use, or made available for use, as a fuel in diesel engines subject to the provisions of either 40 CFR Part 89, Part 92, Part 94, or Part 1039.

(eee) Heating oil means any number 1 or number 2 distillate (other than jet fuel) that does not meet the definitions of motor vehicle, nonroad, locomotive, marine or NRLM diesel fuel. For example, heating oil can include fuel suitable for use in furnaces, boilers, stationary diesel engines, and similar applications and which is commonly or commercially known or sold as heating oil, fuel oil, and similar trade names.

(fff) Diesel fuel blending stock, blendstock, or component means any liquid compound which is blended with other liquid compounds to produce diesel fuel.

(ggg) Transmix means an interface mixture in a product pipeline that cannot practicably be added to either of the adjoining products that produced the interface and still meet product specifications and standards. For example, a mixture of gasoline and diesel fuel would generally be considered transmix.

(hhh) - (iii) [Reserved]

(jjj) Fuel Marker means the fuel marker required in heating oil from 2007 through 2010 pursuant to § 80.510(c)(1) and in locomotive and marine diesel fuel from 2010 through 2014 pursuant to the requirements of § 80.510(c)(2).

(kkk) Solvent yellow 124 means N-ethyl-N-[2-[1-(2-methylpropoxy)ethoxyl]-4-phenylazo]-benzeneamine.

(lll) Nonroad diesel engine means, for the purposes of 40 CFR subpart I only, a land-based nonroad diesel engine subject to the provisions of either 40 CFR Part 89 or Part 1039.

(mmm) Locomotive diesel engine means, for purposes of 40 CFR subpart I only, a diesel engine subject to the provisions of 40 CFR Part 92.

(nnn) Marine diesel engine means, for purposes of 40 CFR subpart I only, a marine diesel engine subject to the provisions of either 40 CFR Part 89 or 40 CFR Part 94.

(ooo) Transmix processor means a refiner who produces diesel fuel or gasoline from transmix.

6. Section 80.230 is amended by revising paragraphs (b)(1) and (b)(2) to read as follows:

**§ 80.230 Who is not eligible for the hardship provisions for small refiners?**

\* \* \* \* \*

(b)(1)(i) Refiners who qualify as small under § 80.225, and subsequently employ more than 1,500 people as a result of merger with or acquisition of or by another entity, or exceed the 155,000 bpcd crude capacity limit as a result of merger with or acquisition of or by another entity after January 1, 2004, are disqualified as small refiners. If this occurs the refiner shall notify EPA in writing no later than 20 days following this disqualifying event.

(ii) Except as provided under subparagraph (b)(1)(iii), any refiner whose status changes under this paragraph shall meet the applicable standards of § 80.195 within a period of up to 24 months of the disqualifying event for any of its refineries that were previously subject to the small refiner standards of 80.240(a). However, such period shall not extend later than December 31, 2007, or, for refineries for which the Administrator has approved an extension of the small

refiner gasoline sulfur standards under 80.553(c), December 31, 2010.

(iii) A refiner may apply to EPA for additional time to comply with the standards of § 80.195 if more than 24 months would be required for the necessary engineering, permitting, construction, and start-up work to be completed. Such applications must include detailed technical information supporting the need for additional time and a proposed amount of additional time. EPA will base a decision to approve additional time on information provided by the refiner and on other relevant information. In no case will EPA extend the compliance date beyond December 31, 2007, or, for refineries for which the Administrator has approved an extension of the small refiner gasoline sulfur standards under 80.553(c), December 31, 2010.

(2) Any refiner who qualifies as small under § 80.225 may elect to meet the standards under § 80.195 by notifying EPA in writing no later than November 15 prior to the year the change will occur. Any refiner whose status changes under this paragraph shall meet the standards under § 80.195 beginning with the first averaging period subsequent to the status change.

\* \* \* \* \*

7. Section 80.240 is amended by adding paragraph (f) to read as follows:

**§ 80.240 What are the small refiner gasoline sulfur standards?**

\* \* \* \* \*

(f)(1) In the case of a refiner without approved small refiner status under § 80.235 who acquires a refinery from a refiner with approved small refiner status, the applicable small refiner standards under paragraph (a) of this section will apply to the acquired small refinery for a period up to 24 months from the date of acquisition of the refinery, but no later than December 31, 2007, or, for a refinery for which the Administrator has approved an extension of the small refinery gasoline sulfur standards under § 80.553(c), December 31, 2010, after which time the standards of § 80.195 shall apply to the acquired refinery.

(2) A refiner may apply to EPA for additional time to comply with the standards of § 80.195 for the acquired refinery if more than 24 months would be required for the necessary engineering, permitting, construction, and start-up work to be completed. Such applications must include detailed technical information supporting the need for additional time and a proposed amount of additional time. EPA will base a decision to approve additional time on information provided by the refiner and on other relevant information. In no case will EPA extend the compliance date beyond December 31, 2007, or, for a refinery for which the Administrator has approved an extension of the small refiner gasoline sulfur standards under 80.553(c), December 31, 2010.

**General Information**

8. Section 80.500 is amended by revising the section heading to read as follows:

**§ 80.500 What are the implementation dates for the motor vehicle diesel fuel sulfur control program?**

9. Section 80.501 is amended by revising paragraph (a) to read as follows:

**§ 80.501 What diesel fuel is subject to the provisions of this subpart?**

(a) Included fuel and additives. The provisions of this subpart apply to motor vehicle diesel fuel as defined in § 80.2(y); nonroad, locomotive, or marine diesel fuel as defined in § 80.2(ddd); diesel fuel additives as defined in § 80.2(xx), heating oil as defined in § 80.2(eee), and motor oil that is used as or intended for use as fuel in diesel motor vehicles or nonroad, locomotive, or marine engines or is blended with diesel fuel for use in diesel motor vehicles or nonroad, locomotive, or marine engines at any downstream location, as provided in § 80.522.

\* \* \* \* \*

10. A new section 80.510 is added to read as follows:

**§ 80.510 What are the standards and marker requirements for nonroad, locomotive, and marine diesel fuels?**

(a) Beginning June 1, 2007. Except as otherwise specifically provided in this subpart, all NRLM diesel fuel is subject to the following per-gallon standards:

- (1) Sulfur content. 500 parts per million (ppm) maximum.
- (2) Cetane index and aromatic content.
  - (i) A minimum cetane index of 40; or
  - (ii) A maximum aromatic content of 35 volume percent.

(b) Beginning June 1, 2010. Except as otherwise specifically provided in this subpart, all NR diesel fuel is subject to the following per-gallon standards:

- (1) Sulfur content. 15 parts per million (ppm) maximum.
- (2) Cetane index and aromatic content.
  - (i) A minimum cetane index of 40; or
  - (ii) A maximum aromatic content of 35 volume percent.

(c) Marker provisions. (1) Beginning June 1, 2007, or June 1, 2006, as applicable under § 80.534, and prior to June 1, 2010:

(i) A refiner or importer shall add 6 milligrams per liter of solvent yellow 124 to any heating oil.

(ii) All NRLM and motor vehicle diesel fuel produced by a refiner or imported by an importer shall be free of solvent yellow 124.

(iii) Any diesel fuel that contains greater than or equal to 0.1 milligrams per liter of solvent yellow 124 shall be deemed to be heating oil and shall be prohibited from use in any motor vehicle, nonroad, locomotive, or marine diesel engine.

(iv) Any diesel fuel that contains less than 0.1 milligrams per liter of solvent yellow 124 shall be considered motor vehicle diesel fuel, NR, LM, or NRLM, as appropriate.

(2) Beginning June 1, 2010 and prior to June 1, 2014:

(i) A refiner or importer shall add 6 milligrams per liter of solvent yellow 124 to any LM diesel fuel.

(ii) All NR produced by a refiner or imported by an importer shall be free of solvent yellow 124.

(iii) Any diesel fuel which contains greater than or equal to 0.1 milligrams per liter of solvent yellow 124 shall be deemed to be LM diesel and shall be prohibited from use in any motor vehicle or nonroad diesel engine.

(iv) Any diesel fuel which contains less than 0.1 milligrams per liter of solvent yellow 124 shall be considered other than locomotive and marine diesel fuel and subject to the applicable requirements.

(d) Pursuant and subject to the provisions of §§ 80.536, 80.554, 80.560, and 80.561:

(1) Until June 1, 2010, nonroad, locomotive, and marine NRLM diesel fuel produced or imported in full compliance with the requirements of those sections is exempt from the per-gallon sulfur content standard and cetane or aromatics standard of paragraph (a) of this section;

(2) Until June 1, 2014, NR diesel fuel produced or imported in full compliance with the requirements of those sections is exempt from the per-gallon standards of paragraph (b) of this section but is subject to a per-gallon standards for sulfur content, cetane, and aromatics of paragraph (a) of this section.

11. A new section 80.511 is added to read as follows:

**§ 80.511 What are the per-gallon and marker requirements that apply to nonroad, locomotive, and marine diesel fuels and heating oil downstream of the refinery or importer?**

(a) Applicable dates for marker requirements at downstream locations.

(1) From June 1, 2006 through May 31, 2010, all NRLM shall contain less than 0.10 milligrams per liter of the marker solvent yellow 124.

(2) Beginning June 1, 2010, all NR diesel fuel shall contain less than 0.10 milligrams per liter of the marker solvent yellow 124.

(b) Applicable dates for per-gallon standards at downstream locations. All NR, LM, and NRLM diesel fuel at any downstream location shall comply with the same per-gallon sulfur content and cetane index or aromatics standard (“per-gallon standards” for purposes of this section) of §80.510, except as follows:

(1)(i) The per-gallon standards of §80.510(a) shall apply beginning August 1, 2007 for all downstream locations other than retail outlets or wholesale purchaser-consumer facilities, and shall apply starting October 1, 2007 for retail outlets and wholesale purchaser-consumer facilities.

(ii) The per-gallon standards of of § 80.510(b) shall apply beginning July 15, 2010 for all downstream locations other than retail outlets or wholesale purchaser-consumer facilities, and shall apply starting September 1, 2010 for retail outlets and wholesale purchaser-consumer facilities.

(2) : Prior to July 15, 2010 at all downstream locations other than retail outlets and wholesale purchaser-consumer facilities and prior to September 1, 2010 at retail outlets and wholesale purchaser-consumer facilities, the 500 ppm per-gallon standard of § 80.510(a) shall not apply at downstream locations once the diesel fuel has been dyed red per Internal Revenue Service Code (26 U.S.C. 4082) for any fuel that was produced or imported pursuant to the provisions of §80.536(f) or §80.554(a) or mixed with fuel produced pursuant to these provisions.

(3) Beginning December 1, 2014, all NR diesel fuel at all downstream locations shall comply with the sulfur standard of §80.510(b).

(c) Fuel Redesignated at a Downstream Location: Subject to the provisions of § 80.527, nonroad, locomotive, and marine diesel fuel may be redesignated at a downstream location to diesel fuel subject to a different §80.510 per-gallon standard, high sulfur NRLM diesel fuel, LM diesel fuel, or heating oil, provided that the PTD reflects the standard of the new designation and:

- (1) The new PTD complies with the appropriate PTD provisions of §80.590;
- (2) Fuel redesignated as high sulfur NRLM diesel fuel complies with the requirements of §80.536(f)(1)(i) through (iv); and
- (3) Fuel redesignated as 500 ppm NR diesel fuel after June 1, 2010 complies with the requirements of §80.536(g)(2)(i) through (iii).

12. A new §80.512 is added to read as follows:

**§ 80.512 May an importer treat diesel fuel as blendstock?**

An importer may exclude diesel fuel that it imports from its calculations under the motor vehicle diesel fuel temporary compliance option and credit calculations under §§ 80.530-80.532, and from its non-highway baseline and nonroad, locomotive and marine diesel fuel credit calculations under §§ 80.534-80.536, and instead the importer may designate such diesel fuel as diesel fuel treated as blendstock (DTAB), if all the following conditions are met:

(a) The DTAB must be included in all applicable baseline, credit and compliance calculations for diesel fuel for a refinery operated by the same company that is the importer. That company must meet all refiner standards and requirements.

(b) The importer-company may not transfer title to the DTAB to another party until the DTAB has been used to produce diesel fuel and all refiner standards and requirements have been met for the diesel fuel produced.

(c) The refinery at which the DTAB is used to produce diesel fuel must be physically located at either the same terminal at which the DTAB first arrives in the U.S., the import facility, or at a facility to which the DTAB is directly transported from the import facility.

(d) The DTAB must be completely segregated from any other diesel fuel, including any diesel fuel tank bottoms, prior to the point of blending, sampling and testing in the importer company's refinery operation. The DTAB may, however, be added to a diesel fuel blending tank where the diesel fuel tank bottom is not included as part of the batch volume for the prior batch. In addition, the DTAB may be placed into a storage tank that contains other DTAB imported by that importer. The DTAB also may be discharged into a tank containing finished diesel fuel of the same category as the diesel fuel which will be produced using the DTAB (e.g., 15 ppm undyed or 15 ppm dyed diesel fuel) provided the blending process is performed in that same tank.

(e) The company must account for the volume of diesel fuel produced using DTAB in a manner that excludes the volume of any previously certified diesel fuel. The diesel fuel tank bottom may not be included in the company's refinery compliance calculations for that batch of diesel fuel. This exclusion of previously-accounted-for diesel fuel must be accomplished using the following approach:

- (1) Determine the volume of any tank bottom that is previously certified diesel fuel before any diesel fuel production begins.

(2) Add the DTAB plus any blendstock to the storage tank, and completely mix the tank.

(3) Determine the volume and sulfur content of the diesel fuel contained in the storage tank after blending is complete. Mathematically subtract the volume of the tank bottom to determine the volume of the DTAB plus blendstock added, which is reported to EPA as a batch of diesel fuel produced.

(4) If previously certified diesel fuel having a sulfur content of 15 ppm or less is blended to DTAB, and the combined product after blending has a sulfur content that exceeds 15 ppm, the refiner must count the volume of previously certified diesel fuel against its downgrading limitation under § 80.527.

(5) As an alternative to paragraphs (e)(1) through (e)(4) of this section, where an importer company has a "blending" tank that is used only to combine DTAB and blending components, and no previously certified diesel fuel is added to the tank, the importer company, in its refiner capacity, may account for the diesel fuel produced in such a blending tank by sampling and testing for the sulfur content of the batch after DTAB and blendstock are added and mixed, and reporting the volume of diesel fuel shipped from that tank, up to the point a new blend is produced by adding new DTAB and blendstock.

(f) The importer must include the volume and sulfur content of each batch of DTAB in the annual importer reports to EPA, but with a notation that the batch is not included in the importer compliance calculations because the product is DTAB. Any DTAB that ultimately is not used in the importer company's refinery operation (e.g., a tank bottom of DTAB at the conclusion of the refinery operation), must be treated as newly imported diesel fuel, for which all required sampling and testing, and recordkeeping must be accomplished, and included in the company's importer compliance calculations for the averaging period when this sampling and testing occurs.

(g) The importer must retain records that reflect the importation, sampling and testing, and physical movement of any DTAB, and must make these records available to EPA, on request.

13. A new §80.513 is added to read as follows:

**§ 80.513 What Provisions Apply to Transmix Processors?**

(a) Beginning June 1, 2006, transmix processors may elect to utilize the provisions of 80.552(a) in lieu of complying with the standards of this subpart.

(b) Beginning June 1, 2007, transmix processors may elect to use the provisions of 80.554(a) in complying with the standards of this subpart.

(c) Beginning June 1, 2010, transmix processors may elect to use the provisions of 80.554(b) in complying with the standards of this subpart.

(d) The provisions of paragraphs (a) through (c) apply only to that volume of fuel produced by transmix processors from previously certified diesel fuel (PCD) that no longer complies with the applicable standards (i.e., contaminated product).

14. Section 80.520 is amended to read as follows:

**§80.520 What are the standards and dye requirements for motor vehicle diesel fuel?**

(a) Standards. All motor vehicle diesel fuel is subject to the following per-gallon standards:

(1) Sulfur content. 15 parts per million (ppm) maximum, except as provided in paragraph (c) of this section;

(2) Cetane index and aromatic content. (i) A minimum cetane index of 40; or

(ii) A maximum aromatic content of 35 volume percent.

(b) Dye requirements. (1) All motor vehicle diesel fuel shall be free of visible evidence of dye solvent red 164 (which has a characteristic red color in diesel fuel), except for motor vehicle diesel fuel that is used in a manner that is tax exempt under section 4082 of the Internal Revenue Code. All motor vehicle diesel fuel shall be free of yellow solvent 124.

(2) Except as provided in § 80.534 and until June 1, 2010 per § 80.510(c), any diesel fuel that does not show visible evidence of dye solvent red 164 shall be considered to be motor vehicle diesel fuel and subject to all the requirements of this subpart for motor vehicle diesel fuel, except for diesel fuel designated or classified for use only in:

(i) The State of Alaska as provided under 40 CFR 69.51; or

(ii) Jet aircraft, a research and development testing program exempted under 80.600, or motor vehicles covered by an exemption under Sec. 80.602.

(c) Pursuant and subject to the provisions of §§ 80.530-80.532, 80.552(a), 80.560-80.561, and 80.620, only motor vehicle diesel fuel produced or imported in full compliance with the requirements of those provisions is subject to the following per-gallon standard for sulfur content: 500 ppm maximum.

(d) Kerosene and any other distillate product, that meets the definition of motor vehicle diesel fuel, is subject to the standards and requirements under this section.

15. Section 80.521 is amended to read as follows:

**§ 80.521 What are the standards and identification requirements for diesel fuel additives?**

(a) Except as provided in paragraph (b) of this section, any diesel fuel additive that is added, intended for adding, used, or offered for use in diesel fuel subject to the 15 ppm sulfur content standards of §§ 80.510(b) or 80.520(a) at any downstream location must:

(1) Have a sulfur content not exceeding 15 ppm; and

(2) Be accompanied by a product transfer document pursuant to § 80.591 indicating that the additive complies with the 15 ppm standard for diesel fuel, except for those diesel fuel additives which are only sold in containers for use by the ultimate consumer of diesel fuel and which are subject to the requirements of § 80.591(d).

(b) Any diesel fuel additive that is added, intended for adding, used, or offered for use in diesel fuel subject to the 15 ppm sulfur content standards of § 80.510(b) or § 80.520(a) may have a sulfur content exceeding 15 ppm provided that:

(1) The additive is added or used in the diesel fuel in a quantity less than 1% by volume of the resultant additive/diesel fuel mixture;

(2) The product transfer document pursuant to § 80.591 indicates that the additive may exceed the 15 ppm sulfur standards of § 80.510(b) or § 80.520(a), that improper use of the additive may result in non-complying fuel, and that the additive complies with the sulfur information requirements of § 80.591(b)(3); and

(3) The additive is not used or intended for use by an ultimate consumer in diesel motor

vehicles or nonroad, locomotive, or marine engines.

16. Section 80.522 is amended to read as follows:

**§ 80.522 May used motor oil be dispensed into diesel motor vehicles or nonroad, locomotive, or marine diesel engines?**

No person may introduce used motor oil, or used motor oil blended with diesel fuel, into the fuel system of model year 2007 or later diesel motor vehicles or model year 2011 or later nonroad diesel engines, unless both of the following requirements have been met:

(a) The vehicle or engine manufacturer has received a Certificate of Conformity under 40 CFR Parts 86 or 89 and the certification of the vehicle or engine configuration is explicitly based on emissions data with the addition of motor oil; and

(b) The oil is added in a manner and rate consistent with the conditions of the Certificate of Conformity.

17. Section 80.523 is amended to read as follows:

**§80.523 What diesel fuel designation requirements apply to refiners and importers?**

Any refiner or importer shall accurately and clearly designate all fuel it produces or imports for use in diesel motor vehicles as either motor vehicle diesel fuel meeting the 15 ppm sulfur standard under §80.520(a)(1) or as motor vehicle diesel fuel meeting the 500 ppm sulfur standard under §80.520(c). Starting June 1, 2007, or June 1, 2006 under the provisions of §80.535, any refiner or importer shall accurately and clearly designate all other diesel fuel it produces or imports as NR diesel fuel, LM diesel fuel, or NRLM diesel fuel meeting the sulfur standard, if any, applicable to that batch under this subpart, and any heating oil it produces or imports as heating oil.

18. Section 80.527 is amended to read as follows:

**§ 80.527 Under what conditions may motor vehicle or nonroad diesel fuel subject to the 15 ppm sulfur standard be downgraded as diesel fuel subject to the 500 ppm sulfur standard?**

(a) Definitions. (1) As used in this section, “downgrade” means changing the classification of undyed diesel fuel subject to the 15 ppm sulfur standard under §§ 80.523 and 80.510(b) or 80.520(a)(1) to diesel fuel subject to the 500 ppm sulfur standard under §§ 80.510(a) or 80.520(c). A downgrade occurs when the change in classification takes place. Changing the classification of undyed diesel fuel subject to the 15 ppm sulfur standard under §§ 80.510(b) or 80.520(a)(1) to heating oil is not a “downgrade” for purposes of this section and is not limited by the provisions of this section.

(2) As used in this section “undyed diesel fuel” means diesel fuel not containing visible evidence of dye solvent red 164.

(b) Who may downgrade. Any person in the diesel fuel distribution system who has custody or title to diesel fuel may downgrade it.

(c) Downgrading limitation. (1) Except as provided in paragraphs (d) and (e) of this section, a person described in paragraph (c)(4) of this section may not downgrade a total of more

than 20% of the undyed diesel fuel (by volume) that is subject to the 15 ppm sulfur standard of §§ 80.510(b) or 80.520(a)(1) while such person has title to or custody of such fuel. In addition, a refiner or importer may only downgrade (subject to the 20% limit) undyed diesel fuel designated under § 80.523 as subject to 15 ppm sulfur standard under §§ 80.510(b) or 80.520(a)(1) after it has been so designated and after it has been moved from the refinery's, or import facility's, storage tank or other vessel where the diesel fuel batch was designated as subject to the sulfur standard of § 80.520(a) or § 80.510(b) under § 80.523.

(2) The limitation of paragraph (c)(1) of this section applies separately to each person who has custody or title of the fuel when it is downgraded.

(3) Compliance with the limitation of paragraph (c)(1) of this section shall be on an annual, calendar year basis (except in 2006 compliance shall be for the period June 1, 2006 through December 31, 2006, and in 2010 compliance shall be for the period January 1 through May 31).

(4) The limitation of this section applies to persons who sell, offer for sale, dispense, supply, store or transport diesel fuel. The limitation does not apply to persons who are transferred custody or title to diesel fuel when it is dispensed into motor vehicles or nonroad engine equipment at retail outlets.

(d) Diesel fuel in violation of the 15 ppm standard. Where diesel fuel subject to the 15 ppm sulfur standard of §§ 80.510(b) or 80.520(a)(1) is found to be in violation of any standard under §§ 80.510 (b) or 80.520(a) and is consequently downgraded, the person, or persons, having custody and title to the fuel at the time it is found to be in violation must include the volume of such fuel toward its 20% volume limitation under paragraph (c)(1) of this section, unless the person, or persons, demonstrates that it did not cause the violation.

(e) Special provisions for retail outlets and wholesale purchaser-consumer facilities. Notwithstanding the provisions of paragraph (c)(1) of this section, retailers and wholesale purchaser-consumers shall comply with the downgrading limitation as follows:

(1) Retailers and wholesale purchaser-consumers who sell, offer for sale, or dispense undyed diesel fuel that is subject to the 15 ppm sulfur standard under § 80.520(a)(1) are exempt from the volume limitations of paragraph (c)(1) of this section.

(2) A retailer or wholesale purchaser-consumer who does not sell, offer for sale, or dispense diesel fuel subject to the 15 ppm sulfur standard under §§ 80.510(b) or 80.520(a)(1) may not downgrade a volume of diesel fuel classified as subject to the 15 ppm sulfur standard greater than 20% of the total volume of motor vehicle diesel fuel that it sells, offers for sale, or dispenses annually.

(f) Product transfer documents. If the custody or title to any diesel fuel that is downgraded under this section is transferred, the product transfer documents under § 80.590 for such fuel must reflect the change in classification to diesel fuel subject to the 500 ppm sulfur standard.

(g) Recordkeeping requirement. Any person subject to the provisions of this section, as described in paragraph (c)(4) of this section, who downgrades any undyed diesel fuel previously classified as subject to the 15 ppm sulfur standard under §§ 80.510(b) or 80.520(a)(1) during any calendar year, must make and maintain records sufficient to show compliance with the requirements and limitations of this section.

(h) Termination of downgrading limitations. The provisions of this section shall not apply after May 31, 2010.

## Temporary Compliance Option

19. Section 80.530 is amended to read as follows:

### **§ 80.530 Under what conditions can 500 ppm motor vehicle diesel fuel be produced or imported?**

(a) Beginning June 1, 2006, a refiner or importer may produce or import motor vehicle diesel fuel subject to the 500 ppm sulfur content standard of § 80.520(c) if all of the following requirements are met:

(1) Each batch of motor vehicle diesel fuel subject to the 500 ppm sulfur content standard must be designated by the refiner or importer as subject to such standard, pursuant to § 80.523.

(2) The refiner or importer must meet the requirements for product transfer documents in § 80.590 for each batch subject to the 500 ppm sulfur content standard.

(3)(i) The volume V500 of motor vehicle diesel fuel that is produced or imported during a compliance period, as provided in paragraph (a)(5) of this section, may not exceed the following volume limit:

(A) For compliance periods prior to 2010, 20% of the volume Vt of motor vehicle diesel fuel that is produced or imported during a compliance period plus an additional volume of motor vehicle diesel fuel represented by credits properly generated and used pursuant to the requirements of §§ 80.531 and 80.532.

(B) For the compliance period of January 1, 2010 through May 31, 2010, the volume of motor vehicle diesel fuel represented by credits properly generated and used pursuant to the requirements of §§ 80.531 and 80.532.

(ii) The terms V500 and Vt have the meaning specified in § 80.531(a)(2).

(4) Compliance with the volume limit in paragraph (a)(3) of this section must be determined separately for each refinery. For an importer, such compliance must be determined separately for each Credit Trading Area (as defined in § 80.531) into which motor vehicle diesel fuel is imported. If a party is both a refiner and an importer, such compliance shall be determined separately for the refining and importation activities.

(5) Compliance with the volume limit in paragraph (a)(3) of this section shall be determined on a calendar year basis, where the calendar year period is from January 1st through December 31st. For the year 2006, compliance shall be determined for the period June 1, 2006 through December 31, 2006. For the year 2010, compliance shall be determined for the period of January 1, 2010 through May 31, 2010.

(6) Any motor vehicle diesel fuel produced or imported above the volume limit in paragraph (a)(3) of this section shall be subject to the 15 ppm sulfur content standard. However, for any compliance period prior to and including 2009, a refiner or importer may exceed the volume limit in paragraph (a)(3) of this section by no more than 5 percent of the volume Vt of diesel fuel produced or imported during the compliance period, provided that for the immediately

following calendar year:

(i) The refiner or importer complies with the volume limit in paragraph (a)(3) of this section; and

(ii) The refiner or importer produces or imports a volume of motor vehicle diesel fuel subject to the 15 ppm sulfur standard, or obtains credits properly generated and used pursuant to the requirements of §§ 80.531 and 80.532 that represent a volume of motor vehicle diesel

fuel, equal to the volume of the exceedance for the prior compliance period.

(b) After May 31, 2010, no refiner or importer may produce or import motor vehicle diesel fuel subject to the 500 ppm sulfur content standard pursuant to this section.

20. Section 80.531 is amended by revising paragraphs (a)(1) and (a)(2) to read as follows:

**§ 80.531 How are motor vehicle diesel fuel credits generated?**

(a) \* \* \*

(1) A refiner or importer may generate credits during the period June 1, 2006 through December 31, 2009, for motor vehicle diesel fuel produced or imported that is designated as subject to the 15 ppm sulfur

content standard under § 80.520(a)(1). Credits may be generated only if the volume of motor vehicle diesel fuel designated under § 80.523 as subject to the 15 ppm sulfur standard of § 80.520(a) exceeds 80% of the total volume of motor vehicle diesel fuel produced or imported as described in paragraph (a)(2) of this section.

(2) The number of motor vehicle diesel fuel credits generated shall be calculated for each compliance period (as specified in § 80.530(a)(5)) as follows:

$$C = V15 - (0.80 \times Vt)$$

Where:

C = the positive number of motor vehicle diesel fuel credits generated, in gallons.

V15 = the total volume in gallons of diesel fuel produced or imported that is designated under § 80.523 as motor vehicle diesel fuel and subject to the standards of § 80.520(a) during the compliance period.

V500 = the total volume in gallons of diesel fuel produced or imported that is designated under § 80.523 as motor vehicle diesel fuel and subject to the 500 ppm sulfur standard under § 80.520(c) plus the total volume of any other diesel fuel (not including V15, diesel fuel that is dyed in accordance with § 80.520(b) at the refinery or import facility where the diesel fuel is produced or imported, or that diesel fuel that is designated as NRLM under § 80.523) represented as having a sulfur content not exceeding 500 ppm.

$$Vt = V15 + V500.$$

\* \* \* \* \*

21. Section 80.532 is amended to read as follows:

**§ 80.532 How are motor vehicle diesel fuel credits used and transferred?**

(a) Credit use. Motor vehicle diesel fuel credits generated under § 80.531 may be used to meet the volume limit of § 80.530(a)(3) provided that:

(1) The motor vehicle diesel fuel credits were generated and reported according to the requirements of this subpart; and

(2) The requirements of paragraphs (b), (c), (d), and (e) of this section are met.

(b) Motor vehicle diesel fuel credits generated under § 80.531 may be used by a refinery or by an importer to comply with section 80.530 by applying one credit for every gallon of motor vehicle diesel fuel needed to meet compliance with the volume limit of § 80.530(a)(3).

(c) Motor vehicle diesel fuel credits generated may be banked for use or transfer in a later compliance period or may be transferred to another refinery or importer for use as provided in paragraph (d) of this section.

(d) Credit transfers. (1) Motor vehicle diesel fuel credits obtained from another refinery or from another importer, including early motor vehicle diesel fuel credits and small refiner motor vehicle diesel fuel credits as described in § 80.531 (b), (c) (d), and (e), may be used to satisfy the volume limit of § 80.530(a)(3) if all the following conditions are met:

(i) The motor vehicle diesel fuel credits were generated in the same CTA as the CTA in which motor vehicle diesel fuel credits are used to achieve compliance;

(ii) The motor vehicle diesel fuel credits are used in compliance with the time period limitations for credit use in this subpart;

(iii) Any credit transfer takes place no later than the last day of February following the compliance period when the motor vehicle diesel fuel credits are used;

(iv) No credit may be transferred more than twice, as follows: The first transfer by the refiner or importer who generated the credit may only be made to a refiner or importer who intends to use the credit; if the transferee cannot use the credit, it may make a second and final transfer only to a refiner or importer who intends to use the credit. In no case may a credit be transferred more than twice before being used or terminated;

(v) The credit transferor must apply any motor vehicle diesel fuel credits necessary to meet the transferor's annual compliance requirements before transferring motor vehicle diesel fuel credits to any other refinery or importer;

(vi) No motor vehicle diesel fuel credits may be transferred that would result in the transferor having a negative credit balance; and

(vii) Each transferor must supply to the transferee records indicating the year the motor vehicle diesel fuel credits were generated, the identity of the refiner (and refinery) or importer who generated the motor vehicle diesel fuel credits, the CTA of credit generation, and the identity of the transferring party, if it is not the same party who generated the motor vehicle diesel fuel credits.

(2) In the case of motor vehicle diesel fuel credits that have been calculated or created improperly, or are otherwise determined to be invalid, the following provisions apply:

(i) Invalid motor vehicle diesel fuel credits cannot be used to achieve compliance with the transferee's volume requirements regardless of the transferee's good faith belief that the motor vehicle diesel fuel credits were valid.

(ii) The refiner or importer who used the motor vehicle diesel fuel credits, and any transferor of the motor vehicle diesel fuel credits, must adjust their credit records, reports and compliance calculations as necessary to reflect the proper motor vehicle diesel fuel credits.

(iii) Any properly created motor vehicle diesel fuel credits existing in the transferor's credit balance after correcting the credit balance, and after the transferor applies motor vehicle diesel fuel credits as needed to meet the compliance

requirements at the end of the compliance period, must first be applied to correct the invalid transfers before the transferor trades or banks the motor vehicle diesel fuel credits.

(e) Limitations on credit use. (1) Motor vehicle diesel fuel credits may not be used to achieve compliance with any requirements of this subpart other than the volume limit of § 80.530(a)(3), unless specifically approved by the Administrator pursuant to a hardship relief petition under § 80.560

or § 80.561.

(2) A refiner or importer possessing motor vehicle diesel fuel credits must use all motor vehicle diesel fuel credits in its possession prior to applying the credit deficit provisions of § 80.530(a)(6).

(3) No motor vehicle diesel fuel credits may be used to meet compliance with this subpart subsequent to the compliance period ending May 31, 2010.

22. A new section 80.533 is added to read as follows:

**80.533 How does a refiner or importer apply for a non-highway baseline percentage?**

(a) The refiner or importer must submit an application to EPA that includes the information required under paragraph (c) of this section by the dates specified in paragraph (f) of this section. A refiner must apply for a non-highway baseline percentage for each refinery. An importer must apply for a non-highway baseline percentage for each CTA, as defined in §80.531(a)(5), into which it imports NRLM fuel.

(b) The non-highway baseline percentage application must be sent to the following address: U.S. EPA - Attn: Non-highway Baseline (6406J), 1200 Pennsylvania Avenue, NW, Washington, DC 20460 (regular mail) or U.S. EPA, Attn: Non-highway Baseline, Transportation and Regional Programs Division, 501 3rd Street, NW (6406J), Washington, DC 20001 (express mail).

(c) A non-highway baseline percentage application must be submitted for each refinery or importer and include the following information:

(1) A listing of the names and addresses of all refineries or importers owned by the corporation for which the refiner or importer is applying for non-highway baseline percentages.

(2)(i) For refiners or importers, the non-highway baseline percentage for produced during the three calendar years beginning January 1 of 2003, 2004, and 2005, as calculated under section (d)(1) of this section.

(ii) For refiners that so choose, in addition to the baseline percentage under (c)(2)(i) of this section, a an alternate non-highway baseline percentage for fuel produced during the period from June 1, 2006 through May 31, 2007, as calculated under paragraph (d)(2) of this section.

(3) A letter signed by the president, chief operating officer of the company, or his/her delegate, stating that the information contained in the non-highway baseline determination is true to the best of his/her knowledge.

(4) Name, address, phone number, facsimile number and E-mail address of a corporate contact person.

(5) For each batch of diesel fuel or heating oil produced or imported during each 12-month baseline calculation period:

(A) The date that production was completed or importation occurred for the batch and the batch designation under § 80.523.

(B) The batch volume; and

(C) Whether the batch was dyed or not dyed, and if not dyed, whether the batch was exempt from the dye provisions of § 80.520(b)(2) and not defined as motor vehicle diesel fuel.

(6) Other appropriate information as requested by EPA.

(d) Calculation of the Non-Highway Baseline Percentage, B%:

(1) Under paragraph (c)(2)(i) of this section, B% equals the average annual volume of diesel fuel and heating oil produced or imported during the three baseline calendar years that was

dyed with solvent red 164 (or if exempt from the dye provision of 520(b)(2), does not meet the definition of motor vehicle diesel fuel) divided by the total volume of diesel fuel and heating oil produced or imported during this period, multiplied by 100.

(2) Under paragraph (c)(2)(ii) of this section, B% equals the average annual volume of diesel fuel and heating oil produced during the period from June 1, 2006 through May 31, 2007 that was dyed with solvent red 164 (or if exempt from the dye provision of 520(b)(2), does not meet the definition of motor vehicle diesel fuel) divided by the total volume of diesel fuel and heating oil produced during this period, multiplied by 100.

(3) For purposes of this section, fuel produced for export, jet fuel (JetA), and fuel specifically produced to meet military specification (such as JP-4, JP-8, and F-76), shall not be included in baseline calculations.

(e) Refineries that did not produce or import facilities that did not import diesel fuel for at least 12 months during the period from January 1, 2003 through December 31, 2005 shall be assigned a non-highway baseline percentage based on their location, as specified in the following table:

PADD 1	PADD 2	PADD 3	PADD 4	Oregon and Washington	Alaska	Hawaii	California
41%	20%	26%	13%	21%	68%	40%	0%

(f)(1) Applications submitted under paragraph (c)(2)(i) of this section must be postmarked by February 28, 2006.

(2) Applications submitted under paragraph (c)(2)(ii) must be postmarked by August 1, 2007.

(g)(1) For applications submitted under paragraph (c)(2)(i) of this section, EPA will notify refiners or importers by June 1, 2006 of approval of the baselines for each of the refiner's refineries or importer's import facilities or of any deficiencies in the refiner's or importer's application.

(2) For applications submitted under paragraph (c)(2)(ii) of this section, EPA will notify refiners by December 1, 2007 regarding approval of the baselines for each of the refiner's refineries or of any deficiencies in the refiner's application.

(g) If at any time the non-highway baseline percentage submitted in accordance with the requirements of this section is determined to be incorrect, EPA will notify the refiner of the corrected baseline.

23. A new section 80.534 is added to read as follows:

**§ 80.534 Use of the non-highway baseline percentage.**

(a) Beginning June 1, 2007, or June 1, 2006 pursuant to the provisions of 80.535(a), and until June 1, 2010, a refiner or importer may use the following provisions in lieu of the dye requirements of §80.520(b) if it has an EPA-approved non-highway baseline percentage under §80.533.

(1) A refiner or importer must notify EPA of its intention to use these provisions by April 1, 2006, or by April 1 of any subsequent year during which it intends to use the these

provisions for the first time.

(2) A separate notification is required for each refinery or each importer by the CTA into which it imports NRLM diesel fuel.

(3) The decision to use or not use these provisions shall apply for the entire calculation period, as defined below, and for the refinery's entire production volume or for the importer's entire import volume by the CTA into which it imports NRLM fuel.

(4) EPA will presume no change from the previous year in the refiner's or importer's decision to use or not use these provisions unless the refiner or importer notifies EPA by April 1 of any year during which such a change would apply.

(b) For purposes of this section:

(1) "Calculation period" means a 12-month period from June 1 through May 31 beginning in 2007, 2008, or 2009. .

(2) "Vtotal" means the total volume of diesel fuel and heating oil produced or imported during a calculation period by a refinery or importer CTA, respectively.

(3) "Vmarked" means the total volume of heating oil produced or imported and marked with solvent yellow 124 by the refiner or importer pursuant to 80.510(c) during a calculation period

(4) "B%" is the non-highway baseline percentage approved by EPA for a refinery or importer CTA pursuant to § 80.533(d).

(5)  $V_{nrlm} = (V_{total} \times B\% / 100) - V_{marked}$

(6)  $V_{motorvehicle} = V_{total} * (100\% - B\%) / 100$

(c) For each calculation period:

(1) The total volume of diesel fuel designated as NRLM (including both 500 ppm diesel fuel and any high sulfur diesel fuel produced pursuant to the provisions of 80.535 and 80.536) whether dyed or undyed may not be greater than  $V_{nrlm}$ .

(2) The volume of diesel fuel designated by a refiner or importer as motor vehicle diesel fuel pursuant to § 80.523 shall not be less than  $V_{motorvehicle}$ .

(d)(1) All the requirements of this subpart applicable to motor vehicle diesel fuel shall apply to diesel fuel designated as motor vehicle diesel fuel under the provisions of this section. Except for the provisions of § 80.510(c) concerning solvent red 164, all the requirements of this subpart applicable to nonroad, locomotive and marine diesel fuel shall apply to diesel fuel designated as NRLM diesel fuel under the provisions of this section.

(2) Diesel fuel designated as motor vehicle diesel fuel and diesel fuel designated as NRLM diesel fuel under the provisions of this section may be mixed after they have been designated, or may remain commingled if designated without the fuels being physically separated, as long as the resulting fuel or mixture of fuels complies with all of the requirements that were applicable to each batch contained in the mixture.

24. A new section 80.535 is added to read as follows.

**§80.535 How are nonroad, locomotive and marine diesel fuel credits generated?**

(a) Generation of high sulfur NRLM credits from June 1, 2006 through May 31, 2007.

(1) During the period June 1, 2006 through May 31, 2007, a refiner or importers may generate credits pursuant to the provisions of this section if all of the following conditions are met:

(i) The refiner or importer notifies EPA of its intention to generate credits and the period during which it will generate credits. This notification must be received by EPA at least 120 calendar days prior to the date it begins generating credits under this section;

(ii) Each batch or partial batch of NRLM diesel fuel for which credits are claimed shall be subject to all of the provisions of this subpart for NRLM diesel fuel as if it had been produced after June 1, 2007 and before June 1, 2010, .

(iii) The number of high-sulfur nonroad credits in gallons that are generated, HSC, shall be a positive number.

(2) The refiner or importer shall choose one of the following methods for calculating credits for each calculation period.

(i) For fuel that is dyed per the requirements of 80.510(c)(1)(i): HSC equals the volume of fuel in gallons produced or imported during the period identified in paragraph (a)(1)(i) of this section that is designated as NRLM diesel fuel and that is subject to and complies with the provisions of §510(a); or

(ii) For undyed or undyed fuel that complies with the provisions of §80.534 for a calculation period of June 1, 2006 through May 31, 2007: HSC equals the sum of

(A) The total volume of fuel produced or imported during the period identified in paragraph (a)(1)(i) of this section that complies with the standards of §80.510(a) or (b); and

(B) The total volume of fuel produced or imported during the period identified in paragraph (a)(1)(i) of this section that complies with the standards of §80.520(a) or (c); minus

(C) Vmotorvehicle, as calculated under §80.534.

(3) High-sulfur nonroad credits shall be generated and designated as follows:

(i) Credits shall be generated separately for each importer by CTA or each refinery of a refiner.

(ii) Credits may not be generated by both a foreign refiner and by an importer for the same motor vehicle diesel fuel.

(iii) Credits shall not be generated under both § 80.531 and this section for the same diesel fuel.

(iv) Any credits generated by a foreign refiner shall be generated as provided in § 80.620(c) and this section.

(4) No credits may be generated under this paragraph after May 31, 2007.

(5) The refiner or importer must submit a report to the Administrator no later than July 31, 2007. The report must demonstrate that all the nonroad, locomotive, and marine diesel fuel produced or imported which generated credits met the applicable requirements of paragraphs (a)(1) through (a)(4) of this section. If the Administrator finds that such credits did not in fact meet the requirements of paragraphs (a)(1) through (a)(4) of this section, as applicable, or if the Administrator determines that there is insufficient information to determine the validity of such credits, the Administrator may deny the credits submitted in whole or in part.

(b) Generation of high-sulfur NRLM credits by small refiners from June 1, 2006 through May 31, 2010.

(1) Notwithstanding the dates specified in paragraph (a) of this section, a refiner that is approved by the EPA as a small refiner under § 80.551 may generate credits under paragraph (a) of this section during any calculation period beginning June 1 of 2006, 2007, 2008, or 2009 for diesel fuel produced or imported that is designated as NRLM diesel fuel and complies with the provisions of §510(a).

(2) The small refiner must submit a report to the Administrator no later than July 31 after

the end of each calculation period during which credits were generated. The report must demonstrate that all the NRLM diesel fuel produced or imported which generated credits met the applicable requirements of paragraphs (a)(1) through (a)(4) of this section. If the Administrator finds that such credits did not in fact meet the requirements of paragraphs (a)(1) through (a)(4) of this section, as applicable, or if the Administrator determines that there is insufficient information to determine the validity of such credits, the Administrator may deny the credits submitted in whole or in part.

(3) In addition, a foreign refiner that is approved by the Administrator to generate credits under § 80.554 shall comply with the requirements of § 80.620.

(c) Generation of 500 ppm nonroad credits from June 1, 2009 through May 31, 2010.

(1) During the calculation period of June 1, 2009 through May 31, 2010, a refiner or importer may generate credits pursuant to the provisions of this section if all of the following conditions are met:

(i) The refiner or importer notifies EPA of its intention to generate credits and the period during which it will generate credits. This notification must be received by EPA at least 120 calendar days prior to the date it begins generating credits under this section;

(ii) Each batch or partial batch of NRLM diesel fuel for which credits are claimed shall be subject to all of the provisions of this subpart for NR diesel fuel as if it had been produced after June 1, 2010.

(iii) The number of 500 ppm nonroad credits in gallons that are generated, C500, shall be a positive number calculated as follows:

$$C500 = V15 - [(100\% - B\%)/100 \times V_{total}]$$

Where:

V15 = The total volume in gallons of 15 ppm diesel fuel produced or imported during the period stated under (c)(1)(i) of this section that is designated as either motor vehicle diesel fuel or nonroad diesel fuel.

Vtotal = As defined in §80.534.

B% = As determined in §80.534.

(2) 500 ppm nonroad credits shall be generated and designated as follows:

(i) Credits shall be generated separately for each importer by CTA or each refinery of a refiner.

(ii) Credits may not be generated by both a foreign refiner and by an importer for the same diesel fuel.

(iii) Credits shall not be generated under both § 80.531 and this section for the same diesel fuel.

(iv) Any credits generated by a foreign refiner shall be generated as provided in § 80.620(c) and this section.

(3) No credits may be generated under this paragraph after May 31, 2010.

(4) The refiner or importer must submit a report to the Administrator no later than July 31, 2010. The report must demonstrate that all the 15 ppm NR diesel fuel produced or imported which generated credits met the applicable requirements of paragraphs (c)(1) through (c)(4) of this section. If the Administrator finds that such credits did not in fact meet the requirements of paragraphs (c)(1) through (c)(4) of this section, as applicable, or if the Administrator determines that there is insufficient information to determine the validity of such credits, the Administrator may deny the credits submitted in whole or in part.

(d) Generation of 500 ppm nonroad credits by small refiners from June 1, 2009 through

May 31, 2012.

(1) Notwithstanding the dates specified in paragraph (c) of this section, a refiner that is approved by the EPA as a small refiner under § 80.551 may generate credits under paragraph (c) of this section during any calculation period beginning June 1 of 2009, 2010, or 2011 for diesel fuel produced or imported that is designated as NR diesel fuel and complies with the provisions of §510(a).

(2) The small refiner must submit a report to the Administrator no later than July 31 after the end of each calculation period during which credits were generated. The report must demonstrate that all the 15 ppm NR diesel fuel produced or imported for which credits were generated met the applicable requirements of paragraphs (c)(1) through (c)(3) of this section. If the Administrator finds that such credits did not in fact meet the requirements of paragraphs (c)(1) through (c)(3) of this section, as applicable, or if the Administrator determines that there is insufficient information to determine the validity of such credits, the Administrator may deny the credits submitted in whole or in part.

(3) In addition, a foreign refiner that is approved by the Administrator to generate credits under § 80.554 shall comply with the requirements of § 80.620.

25. A new section 80.536 is added to read as follows:

**§ 80.536 How are nonroad, locomotive, and marine diesel fuel credits used and transferred?**

(a) Credit use. Credits generated under § 80.535(a) and (b) may be used to meet the nonroad, locomotive, and marine NRLM diesel fuel sulfur standard of § 80.510(a), and credits generated under §80.535(c) and (d) may be used to meet the NR diesel fuel sulfur standard of §80.510(b), provided that:

(1) The credits were generated and reported according to the requirements of this subpart;  
and

(2) The requirements of paragraphs (b), (c), (d), (e), (f), and (g) of this section are met.

(b) Credits generated under § 80.535 may be used by a refinery or an importer to comply with the diesel fuel standards of § 80.510 (a) and (b) by applying one credit for every gallon of diesel fuel that does not comply with the applicable standard.

(c) Credits generated may be banked for use at a later time or may be transferred to any other refinery or importer nationwide for use as provided in paragraph (d) of this section.

(d) Credit transfers. (1) Credits generated under § 80.535 that are obtained from another refinery or importer may be used to comply with the diesel fuel sulfur standards of § 80.510(a) and (b) if all the following conditions are met:

(i) The credits are used in compliance with the time period limitations for credit use in this subpart;

(ii) Any credit transfer is completed no later than the last day of February following the calendar year when the credits are used to comply with a standard under paragraph (a) of this section;

(iii) No credit is transferred more than twice, as follows: The first transfer by the refiner or importer who generated the credit may only be made to a refiner or importer that intends to use the credit; if the transferee cannot use the credit, it may make a second and final transfer only to a refiner or importer who intends to use the credit. In no case may a credit be transferred

more than twice before it is used or it expires;

(iv) The credit transferor applies any credits necessary to meet the transferor's annual compliance requirements before transferring credits to any other refinery or importer;

(v) No credits are transferred that would result in the transferor having a negative credit balance; and

(vi) Each transferor supplies to the transferee records indicating the year the credits were generated, the identity of the refiner (and refinery) or importer that generated the credits, and the identity of the transferor, if it is not the same party that generated the credits.

(2) In the case of credits that have been calculated or created improperly, or are otherwise determined to be invalid, the following provisions apply:

(i) Invalid credits cannot be used to achieve compliance with the transferee's volume requirements regardless of the transferee's good faith belief that the credits were valid.

(ii) The refiner or importer that used the credits, and any transferor of the credits, must adjust its credit records, reports and compliance calculations as necessary to reflect the proper credits.

(iii) Any properly created credits existing in the transferor's credit balance after correcting the credit balance, and after the transferor applies credits as needed to meet the compliance requirements at the end of the calendar year, must first be applied to correct the invalid transfers before the transferor trades or banks the credits.

(e) Limitations on credit use.

(1) Credits may not be used to achieve compliance with any requirements of this subpart other than the standards of § 80.510(a) and (b), unless specifically approved by the Administrator pursuant to a hardship relief petition under § 80.560 or § 80.561.

(2) No credits may be used after May 31, 2012.

(f) Use of high sulfur NRLM credits

(1) High sulfur nonroad credits (HSC) generated under §80.535(a) or (b) may be used on a one for one basis to meet the NRLM diesel fuel sulfur standard of §80.510(a) from June 1, 2007 through May 31, 2010 subject to the following restrictions. Any high sulfur NRLM diesel fuel produced after June 1, 2007 through the use of credits must:

(i) Be dyed red per the provisions of §80.510(c)((1)(i) at the point of production, importation, or redesignation under §80.511(c);

(ii) Be associated with a product transfer document that bears a unique product code as specified in §80.590;

(iii) Be segregated in the distribution system from any 15 ppm sulfur diesel fuel throughout the distribution system to the end-user; and

(iv) Be segregated from any 500 ppm sulfur diesel fuel in the distribution system up to the point where both fuels are dyed red per Internal Revenue Service Code (26 U.S.C. 4082).

(2) No high sulfur NRLM credits may be used subsequent to the compliance period ending May 31, 2010.

(3) Any high sulfur NRLM credits not used under the provisions of paragraph (f)(1) may be converted into 500 ppm nonroad credits on a one for one basis.

(g) Use of 500 ppm nonroad credits.

(1) 500 ppm nonroad credits (C500) generated under §80.535(c) or (d) or converted from high sulfur nonroad credits under (f)(3) of this section may be used on a one for one basis to meet the NR diesel fuel sulfur standard of §80.510(b) from June 1, 2010 through May 31, 2012,

subject to the restrictions in paragraphs (g)(2) and (g)(3) below.

(2) Any 500 ppm nonroad diesel fuel produced or imported after June 1, 2010 through the use of these credits would have to:

- (i) Be dyed red per the provisions of §80.510(c)(1)(i) at the point of production, importation, or redesignation under §80.511(c);
- (ii) Bear a unique product code as specified in §80.590; and
- (iii) Be segregated in the distribution system from any 15 ppm sulfur diesel fuel or 500 ppm sulfur locomotive and marine diesel fuel throughout the distribution system to the end-user.

(3) Refiners or importers wishing to produce or import 500 ppm sulfur nonroad diesel fuel and sell it as nonroad diesel fuel after May 31, 2010 would first have to provide EPA with a plan for EPA approval demonstrating that they will ensure the product segregation described in (2)(iii).

(4) No 500 ppm sulfur credits may be used after May 31, 2012.

### **Small Refiner Hardship Provisions**

26. Section 80.550 is amended to read as follows:

#### **§ 80.550 What is the definition of a motor vehicle diesel fuel small refiner or a NRLM diesel fuel small refiner under this subpart?**

(a) A motor vehicle diesel fuel small refiner is defined as any person, as defined by 42 U.S.C. 7602(e), who:

(1) Produces diesel fuel at a refinery by processing crude oil through refinery processing units; and

(2) Employed an average of no more than 1,500 people, based on the average number of employees for all pay periods from January 1, 1999, to January 1, 2000; and

(3) Had an average crude capacity less than or equal to 155,000 barrels per calendar day (bpcd) for 1999; or

(4) Has been approved by EPA as a small refiner under § 80.235 and continues to meet the criteria of a small refiner under § 80.225.

(b) A NRLM diesel fuel small refiner is defined as any person, as defined by 42 U.S.C. 7602(e), who:

(1) Produces diesel fuel at a refinery by processing crude oil through refinery processing units; and

(2) Employed an average of no more than 1,500 people, based on the average number of employees for all pay periods from January 1, 2002, to January 1, 2003; and

(3) Had an average crude capacity less than or equal to 155,000 barrels per calendar day (bpcd) for 2002.

(c) For the purpose of determining the number of employees and crude capacity under paragraph (a) of this section,

(1) The refiner shall include the employees and crude capacity of any subsidiary companies, any parent company and subsidiaries of the parent company in which the parent has 50% or greater ownership, and any joint venture partners.

(2) For any refiner owned by a governmental entity, the number of employees and total crude capacity as specified in paragraph (a) of this section shall include all employees and crude production of the government to which the governmental entity is a part.

(3) Any refiner owned and controlled by an Alaska Regional or Village Corporation organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C.) is not considered an affiliate of such entity, or with other concerns owned by such entity solely because of their common ownership.

(d) For the purpose of determining the number of employees and crude capacity under paragraph (b) of this section,

(1) The refiner shall include the employees and crude capacity of any subsidiary companies, any parent company and subsidiaries of the parent company in which the parent has 50% or greater ownership, and any joint venture partners.

(2) For any refiner owned by a governmental entity, the number of employees and total crude capacity as specified in paragraph (b) of this section shall include all employees and crude production of the government to which the governmental entity is a part.

(3) Any refiner owned and controlled by an Alaska Regional or Village Corporation organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C.) is not considered an affiliate of such entity, or with other concerns owned by such entity solely because of their common ownership.

(e) (1) Notwithstanding the provisions of paragraph (a) of this section, a refiner that acquires a refinery after January 1, 2000, or reactivates a refinery that was shut down or was non-operational between January 1, 1999, and January 1, 2000, may apply for motor vehicle diesel fuel small refiner status in accordance with the provisions of § 80.551(c)(1)(ii).

(2) Notwithstanding the provisions of paragraph (b) of this section, a refiner that acquires a refinery after January 1, 2003, or reactivates a refinery that was shutdown or was non-operational between January 1, 2002, and January 1, 2003, may apply for NRLM diesel fuel small refiner status in accordance with the provisions of § 80.551(c)(2)(ii).

(f) Ineligible parties. The following are ineligible for the small refiner provisions:

(1)(i) For motor vehicle diesel fuel, refiners with refineries built or started up after January 1, 2000;

(ii) For NRLM diesel fuel, refiners with refineries built or started up after January 1, 2002;

(2)(i) For motor vehicle diesel fuel, persons who exceed the employee or crude oil capacity criteria under this section on January 1, 2000, but who meet these criteria after that date, regardless of whether the reduction in employees or crude oil capacity is due to operational changes at the refinery or a company sale or reorganization;

(ii) For NRLM diesel fuel, persons who exceed the employee or crude oil capacity criteria under this section on January 1, 2003, but who meet these criteria after that date, regardless of whether the reduction in employees or crude oil capacity is due to operational changes at the refinery or a company sale or reorganization;

(3) Importers; and

(4) Refiners who produce motor vehicle diesel fuel or NRLM diesel fuel other than by processing crude oil through refinery processing units.

(g)(1)(i) Refiners who qualify as motor vehicle diesel fuel small refiners under this section and subsequently employ more than 1,500 people as a result of merger with or acquisition of or by another entity, or exceed the 155,000 bpcd crude capacity limit as a result of

merger with or acquisition of or by another entity after January 1, 2004, are disqualified as small refiners. If this occurs, the refiner shall notify EPA in writing no later than 20 days following this disqualifying event.

(ii) Except as provided under subparagraph (g)(3), any refiner whose status changes under this paragraph shall meet the applicable standards of § 80.520 within a period of up to 24 months of the disqualifying event for any of its refineries that were previously subject to the small refiner standards of 80.552, but no later than the May 31, 2010.

(2)(i) Refiners who qualify as NRLM diesel fuel small refiners under this section and subsequently employ more than 1,500 people as a result of merger with or acquisition of or by another entity, or exceed the 155,000 bpcd crude capacity limit as a result of merger with or acquisition of or by another entity after January 1, 2004, are disqualified as small refiners. If this occurs, the refiner shall notify EPA in writing no later than 20 days following this disqualifying event.

(ii) Except as provided under subparagraph (g)(3), any refiner whose status changes under this paragraph shall meet the applicable standards of § 80.510 within a period of up to 24 months of the disqualifying event for any of its refineries that were previously subject to the small refiner standards of 80.552, but no later than the dates specified in §§ 80.554(a) or 554(b), as applicable.

(3) A refiner may apply to EPA for additional time to comply with the standards of §§ 80.520 or 80.510 if more than 24 months would be required for the necessary engineering, permitting, construction, and start-up work to be completed. Such applications must include detailed technical information supporting the need for additional time and a proposed amount of additional time. EPA will base a decision to approve additional time on information provided by the refiner and on other relevant information. In no case will EPA extend the compliance date beyond May 31, 2010 for a motor vehicle diesel fuel small refiner or beyond the dates specified in §§ 80.554(a) or 554(b), as applicable, for a NRLM diesel fuel small refiner.

27. Section 80.551 is amended to read as follows:

**§ 80.551 How does a refiner obtain approval as a small refiner under this subpart?**

(a) (1) (i) Applications for motor vehicle diesel fuel small refiner status must be submitted to EPA by December 31, 2001.

(ii) Applications for NRLM diesel fuel small refiner status must be submitted to EPA by December 31, 2004.

(2) (i) In the case of a refiner who acquires a refinery after January 1, 2000, or reactivates a refinery that was shutdown between January 1, 1999, and January 1, 2000, the application for motor vehicle diesel fuel small refiner status must be submitted to EPA by June 1, 2003.

(ii) In the case of a refiner who acquires a refinery after January 1, 2003, or reactivates a refinery that was shutdown between January 1, 2002, and January 1, 2003, the application for NRLM diesel fuel small refiner status must be submitted to EPA by June 1, 2006.

(b) Applications for small refiner status must be sent via certified mail with return receipt or express mail with return receipt to: U.S. EPA- Attn: Diesel Small Refiner Status (6406J), 1200 Pennsylvania Avenue, NW (6406J), Washington, DC 20460 (certified mail/return receipt) or Attn: Diesel Small Refiner Status, Transportation and Regional Programs Division, 501 3rd

Street, NW (6406J), Washington, DC 20001 (express mail/return receipt).

(c) The small refiner status application must contain the following information for the company seeking small refiner status, plus any subsidiary companies, any parent company and subsidiaries of the parent company in which the parent has 50% or greater ownership, and any joint venture partners:

(1) For motor vehicle diesel fuel small refiners,

(i) A listing of the name and address of each location where any employee worked during the 12 months preceding January 1, 2000; the average number of employees at each location based upon the number of employees for each pay period for the 12 months preceding January 1, 2000; and the type of business activities carried out at each location; or

(ii) In the case of a refiner who acquires a refinery after January 1, 2000, or reactivates a refinery that was shutdown between January 1, 1999, and January 1, 2000, a listing of the name and address of each location where any employee of the refiner worked since the refiner acquired or reactivated the refinery; the average number of employees at any such acquired or reactivated refinery during each calendar year since the refiner acquired or reactivated the refinery; and the type of business activities carried out at each location.

(2) For NRLM diesel fuel small refiners,

(i) A listing of the name and address of each location where any employee worked during the 12 months preceding January 1, 2003; the average number of employees at each location based upon the number of employees for each pay period for the 12 months preceding January 1, 2003; and the type of business activities carried out at each location; or

(ii) In the case of a refiner who acquires a refinery after January 1, 2003, or reactivates a refinery that was shutdown between January 1, 2002, and January 1, 2003, a listing of the name and address of each location where any employee of the refiner worked since the refiner acquired or reactivated the refinery; the average number of employees at any such acquired or reactivated refinery during each calendar year since the refiner acquired or reactivated the refinery; and the type of business activities carried out at each location.

(3) The total corporate crude capacity of each refinery as reported to the Energy Information Administration (EIA) of the U.S. Department of Energy (DOE) for the most recent 12 months of operation. The information submitted to EIA is presumed to be correct. In cases where a company disagrees with this information, the company may petition EPA with appropriate data to correct the record when the company submits its application for small refiner status. EPA may accept such alternate data at its discretion.

(4) For motor vehicle diesel fuel, an indication of whether the refiner, for each refinery, is applying for:

(i) The ability to produce motor vehicle diesel fuel subject to the 500 ppm sulfur content standard under § 80.520(c) or generate credits under § 80.531, pursuant to the provisions of § 80.552(a) or (b); or

(ii) An extension of the duration of its small refiner gasoline sulfur standard under § 80.553, pursuant to the provisions of § 80.552(c).

(5) For NRLM diesel fuel, an indication of whether the refiner, for each refinery, is applying for:

(i) The ability delay compliance under § 80.554(a) or (b) or to generate NRLM diesel sulfur credits under § 80.535, pursuant to the provisions of § 80.554(c); or

(ii) An adjustment to its small refiner gasoline sulfur standard under § 80.240(a), pursuant to the provisions of § 80.554(d).

(6) A letter signed by the president, chief operating or chief executive officer of the company, or his/her designee, stating that the information contained in the application is true to the best of his/her knowledge.

(7) Name, address, phone number, facsimile number and e-mail address (if available) of a corporate contact person.

(d) For joint ventures, the total number of employees includes the combined employee count of all corporate entities in the venture.

(e) For government-owned refiners, the total employee count includes all government employees.

(f) Approval of small refiner status for refiners who apply under § 80.550(e) will be based on all information submitted under paragraph (c) of this section, except as provided in § 80.550(e).

(g) EPA will notify a refiner of approval or disapproval of small refiner status by letter. If disapproved, the refiner must comply with the sulfur standards in § 80.520 or § 80.510, as appropriate, except as otherwise provided in this subpart.

(h) If EPA finds that a refiner provided false or inaccurate information on its application for small refiner status, upon notice from EPA the refiner's small refiner status will be void *ab initio*.

(i) Upon notification to EPA, an approved small refiner may withdraw its status as a small refiner. Effective on January 1 of the year following such notification, the small refiner will become subject to the sulfur standards in § 80.520 or § 80.510, as appropriate, unless one of the other hardship provisions of this subpart apply.

28. Section 80.552 is amended by revising the section heading and paragraphs (a), (b), (c), and (e) to read as follows:

**§ 80.552 What compliance options are available to motor vehicle diesel fuel small refiners?**

(a) A refiner that has been approved by EPA as a motor vehicle diesel fuel small refiner under § 80.551(g) may produce motor vehicle diesel fuel subject to the 500 ppm sulfur content standard pursuant to the provisions of § 80.530, except that the volume limits of § 80.530(a)(3) shall only apply to that volume  $V_{500}$  of diesel fuel that is produced or imported during a calendar year that exceeds 105% of the baseline volume established under § 80.595. The calendar year period shall be from January 1st through December 31st. For the period June 1, 2006 through December 31, 2006, the volume limits shall only apply to that volume  $V_{500}$  that exceeds 60% of the baseline volume.

(b) A refiner that has been approved by EPA as a motor vehicle diesel fuel small refiner under § 80.551(g) may generate motor vehicle diesel fuel credits pursuant to the provisions of § 80.531, except that for purposes of § 80.531(a) the term Credit shall equal  $V_{15}$ , without further adjustment.

(c) A refiner that has been approved by EPA as a motor vehicle diesel fuel small refiner under § 80.551(g) may apply for an extension of the duration of its small refiner gasoline sulfur standards pursuant to § 80.553.

\* \* \* \* \*

(e) The provisions of this section shall apply separately for each refinery owned or operated by a motor vehicle diesel fuel small refiner.

29. A new section 80.554 is added to read as follows:

**§80.554 What compliance options are available to NRLM diesel fuel small refiners?**

(a) Option 1: A refiner that has been approved by EPA as a NRLM diesel fuel small refiner under § 80.551(g) may produce NRLM diesel fuel from June 1, 2007 through May 31, 2010 that is exempt from the standards of § 80.510(a).

(i) The volume of NRLM diesel fuel that is exempt from § 80.510(a) must be less than or equal to 105 percent of  $V_{\text{NRLM}}$  as defined in § 80.534.

(ii) Any volume of NRLM diesel fuel in excess of 105 percent of  $V_{\text{NRLM}}$  will be subject to the 500 ppm sulfur standard of § 80.510(a).

(iii) High-sulfur NRLM produced under this paragraph must:

- (A) Be dyed red per the provisions of §80.510(c)(1)(i) at the point of production, importation, or redesignation under §80.511(c);
- (B) Be associated with a product transfer document that bears a unique product code as specified in §80.590;
- (C) Be segregated in the distribution system from any 15 ppm sulfur diesel fuel throughout the distribution system to the end-user; and
- (D) Be segregated from any 500 ppm sulfur diesel fuel in the distribution system up to the point where both fuels are dyed red per Internal Revenue Service Code (26 U.S.C. 4082).

(b) Option 2: A refiner that has been approved by EPA as a NR diesel fuel small refiner under § 80.551(g) may produce from June 1, 2010, through May 31, 2014, NR diesel fuel subject to the standards of § 80.510(a).

(i) The volume of NR diesel fuel that may be subject to the 500 ppm sulfur standard must be equal to or less than 105 percent of  $V_{\text{NRLM}}$  as defined in § 80.534, less any volume of marked locomotive and marine diesel fuel pursuant to § 80.510(c).

(ii) NR diesel fuel produced in excess of the volume allowed under paragraph (b)(i) of this section will be subject to the standards of § 80.510(b)(1).

(iii) 500 ppm NR fuel produced under this paragraph must:

- (A) Be dyed red per the provisions of §80.510(c)(1)(i) at the point of production, importation, or redesignation under §80.511(c);
- (B) Bear a unique product code as specified in §80.590; and
- (C) Be segregated in the distribution system from any 15 ppm sulfur diesel fuel or 500 ppm sulfur locomotive and marine diesel fuel throughout the distribution system to the end-user.

(iv) Refiners or importers wishing to produce or import 500 ppm sulfur NR diesel fuel and sell it as NR diesel fuel after May 31, 2010 would first have to provide EPA with a plan for EPA approval demonstrating that they will ensure the product segregation described in (iii)(C).

(c) Option 3: A refiner that has been approved by EPA as a NRLM diesel fuel small refiner under § 80.551(g) may generate diesel fuel credits under the provisions of § 80.535(b) and (d), except as provided in paragraph (d)(1) of this section.

(d)(1) Option 4: In lieu of Options 1, 2, and 3 of this section, a refiner that has been approved by EPA as a NRLM diesel fuel small refiner under § 80.551(g) may choose to adjust its small refiner gasoline sulfur standards, subject to the following conditions:

(i) The refiner must produce NRLM diesel fuel meeting the standards of § 80.510(b) by

June 1, 2006 and every year thereafter until the expiration of the refiner's small refiner gasoline sulfur standards (i.e., through calendar years 2007 or 2010);

(ii) The refiner must produce NRLM fuel each year or partial year under (i) above at a volume that is equal to at least 85% of  $V_{\text{NRLM}}$ , as defined in § 80.534, calculated on an annual basis.

(2)(i) For a refiner meeting the conditions of (d)(1) of this section, beginning January 1, 2004, the applicable small refiner's annual average and per-gallon cap gasoline sulfur standards will be the standards of § 80.240(a) increased by a factor of 1.20 for the duration of the refiner's small refiner gasoline sulfur standards under § 80.240(a) or § 80.553 (i.e., through calendar years 2007 or 2010).

(ii) In no case may the per-gallon cap exceed 450 ppm.

(3)(i) If the refiner fails to produce the necessary volume of 15 ppm NRLM fuel by June 1, 2006 under (d)(1)(i) of this section, the refiner must report this in its annual report under § 80.599, and the adjustment of gasoline sulfur standards under (d)(2)(i) of this section will be considered void as of January 1, 2004.

(ii) If such a refiner had produced gasoline above its interim gasoline sulfur standard of § 80.240(a) prior to June 1, 2006, such fuel will not be considered in violation of the small refiner standards under § 80.240(a), provided the refiner obtains and uses a quantity of gasoline sulfur credits equal to the volume of gasoline exceeding the small refiner standards multiplied by the number of parts per million by which the gasoline exceeded the small refiner standards.

(e) The provisions of this section shall apply separately for each refinery owned or operated by a NRLM diesel fuel small refiner.

30. A new section 80.555 is added to read as follows:

**§ 80.555 What Provisions are Available to a Large Refiner that Acquires a Small Refiner or One or More of its Refineries?**

(a) In the case of a refiner without approved small refiner status who acquires a refinery from a refiner with approved status as a motor vehicle diesel fuel small refiner or a NRLM diesel fuel small refiner under § 80.551(g), the applicable small refiner provisions of §§ 80.552 and 80.554 may apply to the acquired small refinery for a period of up to 24 months from the date of acquisition of the refinery. In no case shall this period extend beyond May 31, 2010 for a motor vehicle diesel fuel small refiner or beyond the dates specified in §§ 80.554(a) or (b), as applicable, for a NRLM diesel fuel small refiner.

(2) A refiner may apply to EPA for additional time to comply with the standards of §§ 80.520 or 80.510 for the acquired refinery if more than 24 months would be required for the necessary engineering, permitting, construction, and start-up work to be completed. Such applications must include detailed technical information supporting the need for additional time and a proposed amount of additional time. EPA will base a decision to approve additional time on information provided by the refiner and on other relevant information. In no case will EPA extend the compliance date beyond May 31, 2010 for a motor vehicle diesel fuel small refiner or beyond the dates specified in §§ 80.554(a) or (b), as applicable, for a NRLM diesel fuel small refiner.

**Other Hardship Provisions**

31. Section 80.560 is amended by revising paragraphs (a), (b), (d), (e), (h), (i), (k) and (l) to read as follows:

**§ 80.560 How can a refiner seek temporary relief from the requirements of this subpart in case of extreme hardship circumstances?**

(a) EPA may, at its discretion, grant a refiner, for one or more of its refineries, temporary relief from some or all of the provisions of this subpart. Such relief shall be no less stringent than the small refiner compliance options specified in § 80.552 for motor vehicle diesel fuel and § 80.554 for NRLM diesel fuel. EPA may grant such relief provided that the refiner demonstrates that:

(1) Unusual circumstances exist that impose extreme hardship and significantly affect the refiner's ability to comply by the applicable date; and

(2) It has made best efforts to comply with the requirements of this subpart.

(b) (i) For motor vehicle diesel fuel, applications must be submitted to EPA by June 1, 2002 to the following address: Applications for small refiner status must be sent via certified mail with return receipt or express mail with return receipt to: U.S. EPA - Attn: Diesel Hardship (6406J), 1200 Pennsylvania Avenue, NW (6406J), Washington, DC 20460 (certified mail/return receipt) or Attn: Diesel Hardship, Transportation and Regional Programs Division, 501 3rd Street, NW (6406J), Washington, DC 20001 (express mail/return receipt). EPA reserves the right to deny applications for appropriate reasons, including unacceptable environmental impact. Approval to distribute motor vehicle diesel fuel not subject to the 15 ppm sulfur standard may be granted for such time period as EPA determines is appropriate, but shall not extend beyond May 31, 2010.

(ii) For NRLM diesel fuel, applications must be submitted to EPA by June 1, 2005 to the following address: U.S. EPA - Attn: Diesel Hardship, 1200 Pennsylvania Avenue, NW (6406J), Washington, DC 20460 (certified mail/return receipt) or Attn: Diesel Hardship, Transportation and Regional Programs Division, 501 3rd Street, NW (6406J), Washington, DC 20001 (express mail/return receipt). EPA reserves the right to deny applications for appropriate reasons, including unacceptable environmental impact. Approval to distribute NRLM diesel fuel not subject to the 500 ppm sulfur standard may be granted for such time period as EPA determines is appropriate, but shall not extend beyond May 31, 2010. Approval to distribute NR diesel fuel not subject to the 500 ppm sulfur standard may be granted for such time period as EPA determines is appropriate, but shall not extend beyond May 31, 2014.

\* \* \* \* \*

(d) Applicants must provide, at a minimum, the following information:

(1) Detailed description of efforts to obtain capital for refinery investments and efforts made to obtain credits for compliance under § 80.531 for motor vehicle diesel fuel or § 80.535-6 for NRLM or NR diesel fuel;

(2) Bond rating of entity that owns the refinery (in the case of joint ventures, include the bond rating of the joint venture entity and the bond ratings of all partners; in the case of corporations, include the bond ratings of any parent or subsidiary corporations); and

(3) Estimated capital investment needed to comply with the requirements of this subpart by the applicable date.

(e) In addition to the application requirements of paragraph (b) of this section, a refiner's application for temporary relief under this paragraph must also include a compliance plan. Such compliance plan shall demonstrate how the refiner will engage in a quality assurance testing

program to ensure that the following conditions are met:

(1) Its motor vehicle diesel fuel subject solely to the sulfur standards under § 80.520(c) has not caused motor vehicle diesel fuel or subject to the 15 ppm standard § 80.520(a)(1) to fail to comply with that standard; or

(2) Its NR diesel fuel subject solely to the sulfur standards under § 80.510(a) has not caused NR diesel fuel subject to the 15 ppm standard under § 80.510(b) to fail to comply with that standard.

(3) The quality assurance program must at least include periodic sampling and testing at the party's own facilities and at downstream facilities in the refiner's or importer's diesel fuel distribution system, to determine compliance with the applicable sulfur standards for both categories of motor vehicle diesel fuel; examination at the party's own facilities and at applicable downstream facilities, of product transfer documents to confirm appropriate transfers and deliveries of both products; and inspection of retailer and wholesale purchaser-consumer pump stands for the presence of the labels and warning signs required under this section. Any violations that are discovered shall be reported to EPA within 48 hours of discovery.

\* \* \* \* \*

(h) (1) Refiners who are granted a hardship relief standard for any refinery, and importers of fuel subject to temporary refiner relief standards, may not distribute the diesel fuel subject to the sulfur standard under 80.520(c) for use in model year 2007 and later vehicles and must comply with all applicable provisions of this subpart.

(2) Refiners who are granted a hardship relief standard for any refinery, and importers of fuel subject to temporary refiner relief standards, may not distribute the diesel fuel subject to the sulfur standard under 80.510(a) for use in model year 2011 and later nonroad engines and must comply with all applicable provisions of this subpart.

(i) EPA may impose any reasonable conditions on waivers under this section, including limitations on the refinery's volume of motor vehicle diesel fuel and NRLM diesel fuel subject to a temporary refiner relief standards.

\* \* \* \* \*

(k) The individual refinery sulfur standard and the compliance plan will be approved or disapproved by the Administrator, and approval will be effective when the refiner (or importer, as applicable, in the case of compliance plans) receives an approval letter from EPA. If disapproved, the refiner or importer must comply with the motor vehicle diesel fuel standard under §80.520(a)(1) by the appropriate compliance date specified in § 80.500 or the NRLM standards and compliance dates under § 80.510(a) and (b) as applicable.

(l) If EPA finds that a refiner provided false or inaccurate information on its application for hardship relief, EPA's approval of the refiners application will be void *ab initio*.

32. Section 80.561 is amended by revising the introductory text and paragraphs (c), (d) and (f) to read as follows:

**§ 80.561 How can a refiner or importer seek temporary relief from the requirements of this subpart in case of extreme unforeseen circumstances?**

In appropriate extreme, unusual, and unforeseen circumstances (*e.g.*, natural disaster or refinery fire) which are clearly outside the control of the refiner or importer and which could not have been avoided by the exercise of prudence, diligence and due care, EPA may permit a

refiner or importer, for a brief period, to distribute motor vehicle diesel fuel or NRLM diesel fuel which does not meet the requirements of this subpart if:

\* \* \* \* \*

(c) The refiner or importer can show how the requirements for motor vehicle diesel fuel or NRLM diesel fuel will be expeditiously achieved;

(d) The refiner or importer agrees to make up any air quality detriment associated with the nonconforming motor vehicle diesel fuel or NRLM diesel fuel, where practicable;

\* \* \* \* \*

(f)(1) In the case of motor vehicle diesel fuel distributed under this section that does not meet the 15 ppm sulfur standard under § 80.520(a)(1), such diesel fuel shall not be distributed for use in model year 2007 or later motor vehicles, and must meet all the requirements and prohibitions of this subpart applicable to diesel fuel meeting the sulfur standard under § 80.520(c), or to diesel fuel that is not motor vehicle diesel fuel, as applicable.

(2) In the case of NR diesel fuel distributed under this section after May 31, 2010 that does not meet the 15 ppm sulfur standard under § 80.510(b), such diesel fuel shall not be distributed for use in model year 2011 or later nonroad engines, and must meet all the requirements and prohibitions of this subpart applicable to diesel fuel meeting the sulfur standard under § 80.510(a) for NRLM fuel.

(3) In the case of NR diesel fuel distributed under this section during the period June 1, 2007 and May 31, 2010 that does not meet the 500 ppm sulfur standard under § 80.510(a), such diesel fuel must meet all the requirements and prohibitions applicable to high sulfur NRLM credit fuel under § 80.536(f).

### Labeling Requirements

33. Section 80.570 is amended to read as follows:

#### **§ 80.570 What labeling requirements apply to retailers and wholesale purchaser-consumers of diesel fuel beginning June 1, 2006?**

(a) Any retailer or wholesale purchaser-consumer who sells, dispenses, or offers for sale or dispensing, motor vehicle diesel fuel subject to the 500 ppm sulfur standard of § 80.520(c), must prominently and conspicuously display in the immediate area of each pump stand from which motor vehicle fuel subject to the 500 ppm standard is offered for sale or dispensing, the following legible label, in block letters of no less than 36-point bold type, printed in a color contrasting with the background:

**LOW-SULFUR HIGHWAY DIESEL FUEL (500 ppm maximum)**

**WARNING**

May damage model year 2007 and later highway vehicles and engines.

Federal Law *prohibits* use in these vehicles.

(b) Any retailer or wholesale purchaser-consumer who sells, dispenses, or offers for sale or dispensing, motor vehicle diesel fuel subject to the 15 ppm sulfur standard of § 80.520(a)(1), must affix the following conspicuous and legible label, in block letters of no less than 36-point bold type, and printed in a color contrasting with the background, to each pump stand:

**ULTRA LOW-SULFUR HIGHWAY DIESEL FUEL (15 ppm maximum)**

Recommended for use in all diesel vehicles and engines.

*Required* for model year 2007 and later highway diesel vehicles and engines.

(c) Any retailer or wholesale purchaser-consumer who sells, dispenses, or offers for sale or dispensing, diesel fuel for non-highway equipment that does not meet the standards for motor vehicle diesel fuel, must affix the following conspicuous and legible label, in block letters of no less than 36-point bold type, and printed in a color contrasting with the background, to each pump stand:

**NON-HIGHWAY DIESEL FUEL (May Exceed 500 ppm Sulfur)**

**WARNING**

May damage or destroy highway engines and their emission controls.

Federal Law *prohibits* use in any highway vehicle or engine.

(d) The labels required by paragraphs (a) through (c) of this section must be placed on the vertical surface of each pump housing and on each side that has gallonage meters or price. The labels shall be on the upper two-thirds of the pump, in a location where they are clearly visible.

34. A new section 80.571 is added to read as follows:

**§ 80.571 What labeling requirements apply to retailers and wholesale purchaser-consumers of NR, LM, or NRLM diesel fuel or heating oil beginning June 1, 2007?**

Any retailer or wholesale purchaser-consumer who sells, dispenses, or offers for sale or dispensing, nonroad (NR), locomotive or marine (LM), or nonroad, locomotive or marine (NRLM) diesel fuel, or heating oil, must prominently and conspicuously display in the immediate area of each pump stand from which non-highway diesel fuel is offered for sale or dispensing, one of the following legible labels, as applicable, in block letters of no less than 36-point bold type, printed in a color contrasting with the background:

(a) For pumps dispensing nonroad, locomotive or marine diesel fuel meeting the 500 ppm sulfur standard of § 80.510(a):

**LOW-SULFUR NON-HIGHWAY DIESEL FUEL**

**(500 ppm Maximum)**

**WARNING**

Not for Use In Highway Vehicles or Engines.

(b) For pumps dispensing nonroad, locomotive or marine diesel fuel meeting the 15 ppm sulfur standard of § 80.510(b):

**ULTRA-LOW SULFUR NON-HIGHWAY DIESEL FUEL**

**(15 ppm Maximum)**

*Required* for All Model Year 2011 and Newer Nonroad Diesel Engines.

Recommended for Use in All Nonroad, Locomotive and Marine Diesel Engines.

**WARNING**

Not for Use in Highway Vehicles or Engines.

(c) For pumps dispensing nonroad, locomotive or marine diesel fuel not meeting, or not offered as meeting, the 500 ppm sulfur standard of § 80.510(a) or the 15 ppm sulfur standard of § 80.510(b):

**HIGH-SULFUR NON-HIGHWAY DIESEL FUEL**

**(May Exceed 500 ppm)**

**WARNING**

Not for Use In Highway Vehicles or Engines.

Not for Use in Nonroad, Locomotive, or Marine Engines after August 31, 2010.

May Damage Engines Certified for Use on Low-Sulfur or Ultra-Low Sulfur Diesel Fuel.

(d) For pumps dispensing non-highway diesel fuel for use other than in nonroad, locomotive or marine engines, such as for use in stationary diesel engines or as heating oil:

**HEATING OIL (May Exceed 500 ppm Sulfur)**

**WARNING**

Federal Law *Prohibits* Use in Highway Vehicles or Engines, or in Nonroad, Locomotive, or Marine Engines.

May Damage Engines Certified for Use on Low-Sulfur or Ultra-Low Sulfur Diesel Fuel.

(e) The labels required by paragraphs (a) through (d) of this section must be placed on the vertical surface of each pump housing and on each side that has gallonage meters or price. The labels shall be on the upper two-thirds of the pump, in a location where they are clearly visible.

35. A new section 80.572 is added to read as follows:

**§ 80.572 What labeling requirements apply to retailers and wholesale purchaser-consumers of NR or LM diesel fuel and heating oil beginning June 1, 2010?**

Any retailer or wholesale purchaser-consumer who sells, dispenses, or offers for sale or dispensing, nonroad (NR) or locomotive or marine (LM) diesel fuel, or heating oil, must prominently and conspicuously display in the immediate area of each pump stand from which non-highway diesel fuel is offered for sale or dispensing, one of the following legible labels, as applicable, in block letters of no less than 36-point bold type, printed in a color contrasting with the background:

(a) For pumps dispensing NR diesel fuel subject to the 500 ppm sulfur standard of § 80.510(a):

**LOW-SULFUR NON-HIGHWAY DIESEL FUEL**

**(500 ppm Maximum)**

**WARNING**

May Damage Model Year 2011 and Newer Nonroad Engines

Federal Law *Prohibits* Use in All Model Year 2011 and Newer Nonroad Engines.

Not for Use In Highway Vehicles or Engines.

(b) For pumps dispensing NR diesel fuel subject to the 15 ppm sulfur standard of § 80.510(b):

**ULTRA-LOW SULFUR NON-HIGHWAY DIESEL FUEL**

**(15 ppm Maximum)**

*Required* for All Model Year 2011 and Newer Nonroad Diesel Engines.

Recommended for Use in All Nonroad, Locomotive and Marine Diesel Engines.

**WARNING**

Not for Use in Highway Vehicles or Engines.

(c) For pumps dispensing locomotive or marine diesel fuel subject to the 500 ppm sulfur standard of § 80.510(a):

**LOW-SULFUR LOCOMOTIVE OR MARINE DIESEL FUEL**

**( 500 ppm Maximum)**

**WARNING**

Federal Law *Prohibits* Use in Other Nonroad Engines or in Highway Vehicles or Engines

May Damage Model Year 2007 and Newer Highway Diesel Engines and 2011 and Newer Nonroad Diesel Engines.

(d) For pumps dispensing non-highway diesel fuel for use other than in nonroad, locomotive or marine engines, such as for use in stationary diesel engines or as heating oil:

**HEATING OIL (May Exceed 500 ppm Sulfur)**

**WARNING**

Federal Law *Prohibits* Use in Highway Vehicles or Engines, or in Nonroad, Locomotive, or Marine Engines.

May Damage Engines Certified for Use on Low-Sulfur or Ultra-Low Sulfur Diesel Fuel.

(e) The labels required by paragraphs (a) through (d) of this section must be placed on the vertical surface of each pump housing and on each side that has gallonage meters or price. The labels shall be on the upper two-thirds of the pump, in a location where they are clearly visible.

36. A new section 80.573 is added to read as follows:

**§ 80.573 What labeling requirements apply to retailers and wholesale purchaser-consumers of NR, LM, or NRLM diesel fuel, or heating oil beginning June 1, 2014?**

Any retailer or wholesale purchaser-consumer who sells, dispenses, or offers for sale or dispensing, nonroad (NR) or locomotive or marine (LM) diesel fuel, or heating oil, must prominently and conspicuously display in the immediate area of each pump stand from which non-highway diesel fuel is offered for sale or dispensing, one of the following legible labels, as applicable, in block letters of no less than 36-point bold type, printed in a color contrasting with the background:

(a) For pumps dispensing LM diesel fuel subject to the 500 ppm sulfur standard of § 80.510(a), but not later than December 1, 2014:**LOW-SULFUR LOCOMOTIVE OR MARINE DIESEL FUEL**

**(500 ppm Maximum)**

**WARNING**

Federal Law *Prohibits* Use in Other Nonroad Engines or in Highway Vehicles or Engines May Damage Model Year 2007 and Newer Highway Diesel Engines and 2011 and Newer Nonroad Diesel Engines.

(b) For pumps dispensing NR diesel fuel subject to the 15 ppm sulfur standard of § 80.510(b), but not later than December 1, 2014:

**ULTRA-LOW SULFUR NON-HIGHWAY DIESEL FUEL**

**(15 ppm Maximum)**

*Required* for all Nonroad Diesel Engines.

Recommended for Use in All Nonroad, Locomotive and Marine Diesel Engines.

**WARNING**

Not for Use in Highway Vehicles or Engines.

(c) For pumps dispensing non-highway diesel fuel for use other than in nonroad, locomotive or marine engines, such as for use in stationary diesel engines or as heating oil:

**HEATING OIL (May Exceed 500 ppm Sulfur)**

**WARNING**

Federal Law *Prohibits* Use in Highway Vehicles or Engines, or in Nonroad, Locomotive, or

Marine Engines.

May Damage Engines Certified for Use on Low-Sulfur or Ultra-Low Sulfur Diesel Fuel.

(d) The labels required by paragraphs (a) through (c) of this section must be placed on the vertical surface of each pump housing and on each side that has gallonage meters or price. The labels shall be on the upper two-thirds of the pump, in a location where they are clearly visible.

37. Section 80.580 is amended by revising paragraphs (a) introductory text, (a)(2), (a)(3), (a)(4), and (b) to read as follows:

**§80.580 What are the sampling and testing methods for sulfur?**

(a) *Diesel fuel and diesel fuel additives.* The sulfur content of diesel fuel and diesel fuel additives is to be determined in accordance with this section.

\* \* \* \* \*

(2) Test method for sulfur.

(i) Until [insert a date 60 days after publication in the Federal Register], for motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of § 80.520(a)(1), American Society for Testing and Materials (ASTM) standard test method D 6428-99, entitled “Test Method for Total Sulfur in Liquid Aromatic Hydrocarbons and Their Derivatives by Oxidative Combustion and Electrochemical Detection.”

(ii) For motor vehicle diesel fuel and diesel fuel additives subject to the 500 ppm sulfur standard of § 80.520(c), and non-road, locomotive and marine diesel fuel subject to the 500 ppm sulfur standard of § 80.510(a)(1), ASTM standard test method D 2622-98, entitled “Standard Test Method for Sulfur in Petroleum Products by X-Ray Spectrometry.”

(iii) Starting [insert a date 60 days after publication in the Federal Register], for motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of § 80.520(a)(1), any test method approved under § 80.585.

(iv) For nonroad diesel fuel and diesel fuel additives subject to the 15 ppm standard of § 80.510(b), any test method approved under § 80.585.

(3) *Alternative test methods for sulfur.*

(i) Until [insert a date 60 days after publication in the Federal Register], for motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm standard of § 80.520(a)(1), sulfur content may be determined using ASTM standard test method D 5453-00e1, entitled “Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence,” or ASTM D 3120-96, entitled “Standard Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry,” provided that the refiner or importer test result is correlated with the appropriate method specified in paragraph (a)(2) of this section.

(ii) *Options for testing sulfur content of 500 ppm diesel fuel.* (A) For motor vehicle diesel fuel and diesel fuel additives subject to the 500 ppm standard of § 80.520(c), and for nonroad, locomotive and marine diesel fuel subject to the 500 ppm standard of § 80.510(a), sulfur content may be determined using ASTM D 4294-02, entitled “Standard Test Method for Sulfur in Petroleum Products by Energy Dispersive X-Ray Fluorescence Spectrometry;” ASTM D 5453-00e1, “Standard Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence,” or ASTM D 6428-99,

entitled “Test Method for Total Sulfur in Liquid Aromatic Hydrocarbons and Their Derivatives by Oxidative Combustion and Electrochemical Detection,” provided that the refiner or importer test result is correlated with the appropriate method specified in paragraph (2)(ii) of this section; or

(B) For motor vehicle diesel fuel and diesel fuel additives subject to the 500 ppm standard of § 80.520(c), and for nonroad, locomotive and marine diesel fuel subject to the 500 ppm standard of § 80.510(a), sulfur content may be determined using any test method approved under § 80.585.

- (4) *Adjustment Factor for downstream test results.* An adjustment factor of negative 2 ppm shall be applied to the test results, to account for test variability, but only for testing of motor vehicle diesel fuel or nonroad diesel fuel identified as subject to the 15 ppm sulfur standard of §§ 80.510(b) or 80.520(a)(1), at a downstream location as defined in § 80.500(f).
- (b) Incorporation by reference. ASTM standard methods D 2622-98, entitled “Standard Test Method for Sulfur in Petroleum Products by X-Ray Spectrometry,” D 3120-96, entitled “Standard Test Method for Trace Quantities of Sulfur in Light Liquid Petroleum Hydrocarbons by Oxidative Microcoulometry;” D 4294-02, entitled “Standard Test Method for Sulfur in Petroleum Products by Energy Dispersive X-Ray Fluorescence Spectrometry;” D 5453-00e1, entitled “Test Method for Determination of Total Sulfur in Light Hydrocarbons, Motor Fuels and Oils by Ultraviolet Fluorescence;” and D 6299-02, entitled “Standard Practice for Applying Statistical Quality Assurance Techniques to Evaluate Analytical Measurement System Performance;” D 6428-99, entitled “Test Method for Total Sulfur in Light Aromatic Hydrocarbons and their Derivatives by Oxidative Combustion and Electrochemical Detection;” are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Dr., West Conshohocken, PA 19428. Copies may be inspected at the Air Docket Section (LE-131), room M-1500, U.S. Environmental Protection Agency, Docket No. A-99-06, 401 M Street, SW, Washington, DC 20460, or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

\* \* \* \* \*

38. A new section 80.581 is added to read as follows:

**§ 80.581 What are the batch testing and sample retention requirements for motor vehicle and nonroad, locomotive and marine diesel fuel?**

(a) Beginning on June 1, 2006 or earlier pursuant to § 80.531 for motor vehicle diesel fuel and June 1, 2010 or earlier pursuant to § 80.535 for NR, LM, or NRLM diesel fuel, each refiner and importer shall collect a representative sample from each batch of motor vehicle, NR, LM, or NRLM diesel fuel produced or imported and subject to the 15 ppm sulfur content standard. The refiner or importer shall test each sample to determine its sulfur content for compliance with the requirements of this subpart prior to the diesel fuel leaving the refinery or import facility, using an appropriate sampling and testing method as specified in § 80.580.

(b) All test results under this paragraph shall be retained for five years and must be provided to EPA upon request.

39. A new section 80.582 is added to read as follows:

**§80.582 What are the sampling and testing methods for the fuel marker?**

- (a) *Sampling and testing for methods for the fuel marker* . For heating oil and LM diesel fuel subject to the fuel marker requirement in §80.510(c), the identification of the presence and concentration of the fuel marker in diesel fuel may be determined using the test procedures qualified in accordance with the requirements in this section. For NRLM or NR subject to the provisions of §§ 80.510(c)(1)(iv) or 80.510(c)(2)(iv) the identification of the presence and concentration of the fuel marker in diesel fuel may be determined using the test procedures qualified in accordance with the requirements in this section.
- (1) The sampling, sample preparation, and testing methods qualified for use in accordance with the requirements of this section may involve the use of hazardous materials, operations and equipment. This section does not address the associated safety problems which may exist. It is the responsibility of the user of the procedures specified in this section to establish appropriate safety and health practices prior their use. It is also the responsibility of the user to dispose of any by-products which might result from conducting these procedures in a manner consistent with applicable safety and health requirements.
- (b) *What are the precision and accuracy criteria for qualification of fuel marker test methods?*
- (1) Precision means the consistency of a set of measurements and is used to determine how closely analytical results can be duplicated based on repeat measurements of the same material under prescribed conditions. A precision of  $< 0.1$  mg per liter is required, as determined by performing a minimum of 20 repeat tests over a minimum of four days on samples taken from a homogeneous commercially available diesel fuel which meets the applicable industry consensus and federal regulatory specifications and which contains the fuel marker at a concentration in the range of 0.1 to 8 mg per liter. In order to qualify, the 20 results must be a series of tests on the same material and there must be a sequential record of the analysis with no omissions.
- (2) Accuracy means the closeness of agreement between a measured or calculated value and the actual or specified value. An accuracy, of  $\pm 0.05$  mg per liter is required, as determined by performing a minimum of 10 repeat tests on each of at least two commercially available solvent yellow 124 standards, as follows:
- (i) The arithmetic average of a continuous series of at least 10 tests performed on a commercially available solvent yellow 124 standard in the range of 0.1 to 1 mg per liter; and
- (ii) The arithmetic average of a continuous series of at least 10 tests performed on a commercially available solvent yellow 124 standard in the range of 4 to 10 mg per liter.
- (iii) In applying the tests of paragraphs (b)(2)(i) and (b)(2)(ii) of this section, individual test results shall be compensated for any known chemical interferences.
- (c) *What process must a test facility follow in order to qualify a test method for determining the fuel marker content of distillate fuels and how will EPA qualify or decline to qualify a test method?*
- (1) *Qualification of Test Methods approved by Voluntary Consensus-Based Standards Bodies.* Any standard test method developed by a Voluntary Consensus-Based Standards Body, such as the American Society for Testing and Materials (ASTM) or International Standards Organization (ISO), shall be considered a qualified test method for determining the fuel marker content of distillate fuel provided that it meets the precision and accuracy criteria

under paragraph (b) of this section. The qualification of a test method is limited to the single test facility that performed the testing for accuracy and precision. The individual facility must submit the accuracy and precision results for each method following procedures established by the Administrator.

- (2) *Qualification of Test Methods that have not been approved by a Voluntary Consensus-Based Standards Body.*
  - (i) A test method that has not been approved by a Voluntary Consensus-Based Standards Body may be qualified upon approval by the Administrator. The following information must be submitted in the application for approval:
    - (A) Full test method documentation, including a description of the technology and/or instrumentation that makes the method functional.
    - (B) Information demonstrating that the test method meets the accuracy and precision criteria under paragraph (b) of this section.
    - (C) If requested by the Administrator, test results utilizing the method and performed on a sample of commercially available distillate fuel which meets the applicable industry consensus and federal regulatory specifications and which contains the fuel marker.
    - (D) Any additional information requested by the Administrator and necessary to render a decision as to qualification of the test method.
    - (E) The qualification of a test method is limited to the single test facility that performed the testing for accuracy and precision and any other required testing.
  - (3)(i) Within 90 days of receipt of all materials required to be submitted under paragraph (c)(1) or (c)(2) of this section, the Administrator shall determine whether to qualify the test method under this section. The Administrator shall qualify the test method if all materials required under this section are received and the test method meets the accuracy and precision criteria of paragraph (b) of this section.
  - (ii) If the Administrator does not act within 90 days of receipt, the test method shall be deemed qualified until such time as the Administrator provides written notification declining to qualify the method.
  - (iii) If the Administrator finds that an individual test facility has provided false or inaccurate information under this section, upon notice from the Administrator, the qualification shall be *void ab initio*.
  - (iv) The qualification of any test method under this subsection shall be valid for the duration of when the fuel marker requirements remain applicable under this subpart.
- (d) *Quality Control Procedures for Fuel Marker Measurement Instrumentation.* A test shall not be considered a test using a qualified test method unless the following quality control procedures are performed separately for each instrument used to make measurements:
  - (1) Follow all mandatory provisions of ASTM D 6299-02, "Standard Practice for Applying Statistical Quality Assurance Techniques to Evaluate Analytical Measurement System Performance," and construct control charts from the mandatory quality control testing prescribed in paragraph 7.1 of the method, following guidelines under A 1.5.1 for individual observation charts and A 1.5.2 for moving range charts.
  - (2) Follow paragraph 7.3.1 of ASTM D 6299-02 (check standards) using a standard reference material at least monthly or following any major change to the laboratory equipment or test procedure. Any deviation from the accepted reference value of a check standard greater than 0.1 mg per liter must be investigated.
  - (3) Retain batch samples for batches of diesel fuel subject to the fuel marker requirement for a

period at least as long as the period between quality control material or check standard testing.

- (4) Upon discovery of any quality control testing violation of paragraph A 1.5.1.3 or A 1.5.2.1 of ASTM D 6299-02, or any check standard deviation greater than 0.1 mg per liter, conduct an investigation and retest retained samples for fuel batches tested since the last satisfactory quality control material or check standard testing.
- (5) Retain results of quality control testing and retesting of retained samples under paragraph (d)(3) of this section for five years.
- (e) Incorporation by reference. ASTM Standard Methods D 6299-02, entitled “Standard Practice for Applying Statistical Quality Assurance Techniques to Evaluate Analytical Measurement System Performance”. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from the American Society for Testing and Materials, 100 Bar Harbor Dr., West Conshohocken, PA 19428. Copies may be inspected at the Air Docket Section (LE-131), room M-1500, U.S. Environmental Protection Agency, Docket No. A-99-06, 401 M Street, SW, Washington, DC 20460, or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

40. A new section 80.583 is added to read as follows:

**§ 80.583 What alternative sampling and testing requirements apply to importers who transport motor vehicle diesel fuel or nonroad diesel fuel by truck?**

Importers who import diesel fuel subject to the standard under § 80.510(b) or § 80.510(a) into the United States by truck may comply with the following requirements instead of the requirements to sample and test each batch of fuel designated as subject to the 15 ppm sulfur standard under § 80.581 otherwise applicable to importers:

(a) *Terminal testing.* For purposes of determining compliance with the 15 ppm sulfur standard, the importer may use test results for sulfur content testing conducted by the foreign truck-loading terminal operator for diesel fuel contained in the storage tank from which trucks used to transport diesel fuel designated as subject to the 15 ppm sulfur content standard into the United States are loaded, provided the following conditions are met:

(1) The sampling and testing shall be performed after each receipt of diesel fuel into the storage tank, or immediately before each transfer of diesel fuel to the importer’s truck.

(2) The sampling and testing shall be performed according to § 80.580.

(3) At the time of each transfer of diesel fuel to the importer’s truck for import to the U.S., the importer must obtain a copy of the terminal test result that indicates the sulfur content of the truck load, or truck compartment load, as applicable.

(b) *Quality assurance program.* The importer must conduct a quality assurance program, as specified in this paragraph, for each truck loading terminal.

(1) Quality assurance samples must be obtained from the truck-loading terminal and tested by the importer, or by an independent laboratory, and the terminal operator must not know in advance when samples are to be collected.

(2) The sampling and testing must be performed using the methods specified in § 80.580.

(3) The frequency of the quality assurance sampling and testing must be at least one sample for each 50 of an importer’s trucks that are loaded at a terminal, or one sample per month, whichever is more frequent.

(c) *Party required to conduct quality assurance testing.* The quality assurance program under paragraph (b) of this section shall be conducted by the importer. In the alternative, this testing may be conducted by an independent laboratory that meets the criteria under § 80.65(f)(2)(iii), provided the importer receives copies of all results of tests conducted no later than 21 days after the sample was taken..

(d) *Assignment of batch numbers.* The importer must treat each compartment of each truck load of imported diesel fuel as a separate batch for purposes of assigning batch numbers and maintaining records under § 80.592(d), and reporting under § 80.599, except that where different compartments contain homogeneous product of identical designation (including dye or marker status, as well as the sulfur content designation), the total volume of those compartments may be treated as a single batch.

(e) *EPA inspections of terminals.* EPA inspectors or auditors must be given full and immediate access to the truck-loading terminal and any laboratory at which samples of diesel fuel collected at the terminal are analyzed, and must be allowed to conduct inspections, review records, collect diesel fuel samples and perform audits. These inspections or audits may be either announced or unannounced.

(f) *Certified Sulfur-FRDiesel and Certified Sulfur-FRNRDiesel.* This section does not apply to Certified Sulfur-FRDiesel or Certified Sulfur-FRNRDiesel as defined in § 80.620.

(g) *Effect of noncompliance.* If any of the requirements of this section are not met, all motor vehicle diesel fuel and nonroad diesel fuel imported by the truck importer during the time the requirements are not met is deemed in violation of the diesel fuel sulfur standards in § 80.510 or § 80.529(a), as applicable. Additionally, if any requirement is not met, EPA may notify the importer of the violation, and, if the requirement is not fulfilled within 10 days of notification, the truck importer may not in the future use the sampling and testing provisions in this section in lieu of the provisions in § 80.581.

41. A new section 80.584 is added to read as follows:

**§ 80.584 What are the precision and accuracy criteria for approval of test methods for determining the sulfur content of diesel fuel?**

(a) *Precision.* (1) For motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of § 80.520(a)(1) and nonroad diesel fuel and diesel fuel additives subject to the 15 ppm standard of § 80.510(b), a standard deviation less than 0.72 ppm, computed from the results of a minimum of 20 repeat tests made over a minimum of four days on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 5-15 ppm. The 20 results must be a series of tests with a sequential record of the analyses and no omissions.

(2) For motor vehicle diesel fuel and diesel fuel additives subject to the 500 ppm standard of § 80.520(c), and for nonroad, locomotive and marine diesel fuel subject to the 500 ppm standard of § 80.510(a), of a standard deviation less than 9.68 ppm, computed from the results of a minimum of 20 repeat tests made over a minimum of four days on samples taken from a single homogeneous commercially available diesel fuel with a sulfur content in the range of 200-500 ppm. The 20 results must be a series of tests with a sequential record of the analyses and no omissions.

(b) *Accuracy.* (1) For motor vehicle diesel fuel and diesel fuel additives subject to the 15 ppm

sulfur standard of § 80.520(a)(1) and nonroad diesel fuel and diesel fuel additives subject to the 15 ppm sulfur standard of § 80.510(b):

- (A) The arithmetic average of a continuous series of at least 10 tests performed on a commercially available gravimetric sulfur standard in the range of 1-10 ppm sulfur shall not differ from the accepted reference value (ARV) of that standard by more than 0.54 ppm sulfur; and
  - (B) The arithmetic average of a continuous series of at least 10 tests performed on a commercially available gravimetric sulfur standard in the range of 10-20 ppm sulfur shall not differ from the ARV of that standard by more than 0.54 ppm sulfur.
  - (C) In applying the tests of paragraphs (b)(1)(A) and (b)(1)(B) of this section, individual test results shall be compensated for any known chemical interferences.
- (2) For motor vehicle diesel fuel and diesel fuel additives subject to the 500 ppm sulfur standard of § 80.520(c), and for nonroad, locomotive and marine diesel fuel subject to the 500 ppm sulfur standard of § 80.510(a):
- (A) The arithmetic average of a continuous series of at least 10 tests performed on a commercially available gravimetric sulfur standard in the range of 100-200ppm sulfur shall not differ from the ARV of that standard by more than 7.26 ppm sulfur; and
  - (B) The arithmetic average of a continuous series of at least 10 tests performed on a commercially available gravimetric sulfur standard in the range of 400-500 ppm sulfur shall not differ from the ARV of that standard by more than 7.26 ppm sulfur.
  - (C) In applying the tests of paragraphs (b)(2)(A) and (b)(2)(B) of this section, individual test results shall be compensated for any known chemical interferences.

42. A new section 80.585 is added to read as follows:

**§ 80.585 What is the process for approval of a test method for determining the sulfur content of diesel?**

- (a) *Approval of test methods approved by Voluntary Consensus-based Standards Bodies.* For such a method to be approved, the following information must be submitted to the Administrator by each test facility for each test method that it wishes to have approved: Any test method approved by a Voluntary Consensus Based Standards Body, such as the American Society for Testing and Materials (ASTM) or International Standards Organization (ISO), shall be approved as a test method for determining the sulfur content of diesel fuel if it meets the applicable accuracy and precision criteria under § 80.584. The approval of a test method is limited to the single test facility that performed the testing for accuracy and precision. The individual facility must submit the accuracy and precision results for each method following procedures established by the Administrator.
- (b) *Approval of test methods not approved by a Voluntary Consensus-based Standards Body.* For such a method to be approved, the following information must be submitted to the Administrator by each test facility for each test method that it wishes to have approved:
  - (1) Full test method documentation, including a description of the technology and/or instrumentation that makes the method functional.
  - (2) Information demonstrating that the test method meets the applicable accuracy and precision criteria of § 80.584.
  - (3) If requested by the Administrator, test results from use of the method to analyze samples

- of commercially available fuel provided by EPA.
- (4) Any additional information requested by the Administrator and necessary to render a decision as to approval of the test method.
- (c) (1) Within 90 days of receipt of all materials required to be submitted under paragraphs (a) or (b) of this section, the Administrator shall determine whether the test method is approved under this section.
- (2) If the Administrator determines that the test method is not approvable, within 90 days of receipt of all materials required to be submitted under paragraph (a) or (b) of this section, the Administrator will notify the applicant of the reasons for not approving the method. If the Administrator does not notify the applicant within 90 days of receipt of the application, that the test method is not approved, then the test method shall be deemed approved.
- (3) If the Administrator finds that an individual test facility has provided false or inaccurate information under this section, upon notice from the Administrator the approval shall be *void ab initio*.
- (4) The approval of any test method under paragraph (b) of this subsection shall be valid for five (5) years from the date of approval by the Administrator and shall not be extended. If the method is later approved by a Voluntary Consensus-based Standards Body, the approval shall remain valid as long as the conditions of paragraph (a) of this section are met.
- (d) *Quality assurance procedures for sulfur measurement instrumentation.* A test shall not be considered a test using an approved test method unless the following quality control procedures are performed separately for each instrument used to make measurements:
- (1) Follow all mandatory provisions of ASTM D 6299-02, "Standard Practice for Applying Statistical Quality Assurance Techniques to Evaluate Analytical Measurement System Performance," and construct control charts from the mandatory quality control testing prescribed in paragraph 7.1 of the practice, following guidelines under A 1.5.1 for individual observation charts and A 1.5.2 for moving range charts.
- (2) Follow paragraph 7.3.1 of ASTM D 6299-02 (check standards) using a standard reference material at least monthly or following any major change to the laboratory equipment or test procedure. Any deviation from the accepted reference value of a check standard greater than 1.44 ppm (for diesel fuel subject to the 15 ppm sulfur standard) or 19.36 ppm (for diesel fuel subject to the 500 ppm sulfur standard) must be investigated.
- (3) Retain samples of tested batches of diesel fuel for a period at least as long as the period between quality control material or check standard testing occasions.
- (4) Upon discovery of any quality control testing violation of paragraph A 1.5.1.3 or A 1.5.2.1 of ASTM D 6299-02, or any check standard deviation greater than 1.44 ppm (for diesel fuel subject to the 15 ppm sulfur standard) or 19.36 ppm (for diesel fuel subject to the 500 ppm sulfur standard), conduct an investigation into the cause of such violation or deviation and, after restoring method performance to statistical control, retest retained samples from batches originally tested since the last satisfactory quality control material or check standard testing occasion.

43. A new section 80.586 is added to read as follows:

**§ 80.586 What are record retention requirements for test methods approved under this subpart?**

Each individual test facility must retain records related to the establishment of accuracy and precision values, all test method documentation, and any quality control testing and analysis under §§ 80.584-80.585, for five (5) years.

**Recordkeeping and Reporting Requirements**

44. Section 80.590 is amended to read as follows:

**§ 80.590 What are the product transfer document requirements for motor vehicle diesel fuel; nonroad, locomotive and marine diesel fuel; and heating oil?**

(a) On each occasion that any person transfers custody or title to diesel fuel or heating oil, including distillates used or intended to be used as diesel fuel or heating oil, except when such fuel is dispensed into motor vehicles, nonroad equipment, or locomotives at a retail outlet or wholesale purchaser-consumer facility, the transferor must provide to the transferee documents which include the following information:

- (1) The name and address of the transferor and transferee;
- (2) The volume of diesel fuel which is being transferred;
- (3) The location of the diesel fuel at the time of the transfer;
- (4) The date of the transfer;
- (5) An accurate statement of the applicable fuel designation and uses, as follows:
  - (i) Undyed 15 ppm diesel fuel.
    - (A) For the period of June 1, 2006 and later, “15 ppm (maximum) Undyed Ultra-Low Sulfur Diesel Fuel. For use in all diesel vehicles and engines.”
  - (ii) Dyed 15 ppm diesel fuel.
    - (A) For the period of June 1, 2006 and later, “15 ppm (maximum) Dyed Ultra-Low Sulfur Diesel Fuel. For use in all nonroad, locomotive and marine diesel engines. Not for use in highway vehicles or engines except for tax-exempt use in accordance with § 4082 of the Internal Revenue Code.”
  - (iii) Undyed 500 ppm diesel fuel.
    - (A) For the period of June 1, 2006 through November 30, 2010, “500 ppm (maximum) Undyed Low Sulfur Diesel Fuel. For use in Model Year 2006 and older diesel highway vehicles and engines. Also for use in nonroad, locomotive or marine diesel engines. Not for use in 2007 and newer highway vehicles or engines.”
  - (iv) Dyed 500 ppm diesel fuel.
    - (A) For the period of June 1, 2006 through August 31, 2010, “500 ppm (maximum) Dyed Low Sulfur Nonroad, Locomotive and Marine Diesel Fuel. Not for use in highway vehicles or engines except for use in Model Year 2006 and older highway diesel vehicles or engines for tax-exempt use in accordance with § 4082 of the Internal Revenue Code.”
    - (B) For the period of September 1, 2010 through August 31, 2014, “500 ppm (maximum) Dyed Low Sulfur Nonroad Diesel Fuel. For use in 2010 and older nonroad diesel engines. May be used in locomotive and marine diesel engines. Not for use in highway vehicles and engines or model year 2011 or later nonroad engines.”

- (C) For dyed and marked locomotive and marine fuel, during the period June 1, 2010 through August 31, 2014, “500 ppm (maximum) Dyed and Marked Low Sulfur Locomotive and Marine diesel fuel. Not for use in highway or nonroad vehicles and engines.”.
- (D) For dyed locomotive and marine fuel after August 31, 2014, "500 ppm (maximum) Dyed Low Sulfur Locomotive and Marine diesel fuel. Not for use in highway or nonroad vehicles and engines."
- (v) Dyed High Sulfur NLRM Fuel under section 80.510(d)(1), including any mixture of low sulfur and/or ultra-low sulfur diesel fuel with high sulfur NRLM Diesel Fuel.
- (A) For the period June 1, 2006 through August 31, 2010, “High sulfur Dyed Nonroad, Locomotive, and Marine Engine Diesel fuel–sulfur content may exceed 500 ppm. Not for use in highway vehicles or engines. Not for use in any nonroad engines.”
- (vi) Heating oil.
- (A) For heating oil produced or imported at any time beginning June 1, 2006, or beginning June 1, 2006 under section 80.534, "Heating Oil. Not for use in highway vehicles or engines, nonroad engines, or locomotive or marine engines.”
- (b) The following may be substituted for the descriptions in paragraph (a) of this section, as appropriate:
- (1) “This is high sulfur diesel fuel for use only in Guam, American Samoa, or the Northern Mariana Islands.”;
  - (2) “This diesel fuel is for export use only.”;
  - (3) “This diesel fuel is for research, development, or testing purposes only.”;
  - (4) “This diesel fuel is for use in diesel highway vehicles or nonroad, locomotive, or marine engine equipment having an EPA-approved national security exemption only.”
- (c) If undyed and/or unmarked diesel fuel is dyed and/or marked subsequent to the issuance of a product transfer document, at the time the diesel fuel is dyed and/or marked, a new product transfer document must be prepared with the language under paragraph (a)(5) of this section applicable to the changed fuel and provided to subsequent transferees.
- (d) Except for transfers to truck carriers, retailers or wholesale purchaser-consumers, product codes may be used to convey the information required under this section if such codes are clearly understood by each transferee. Codes used to convey the statement in paragraphs (a)(5)(i) and (a)(5)(ii) of this section must contain the number “15”, and codes used to convey the statement in paragraphs (a)(5)(iii) and (a)(5)(iv) of this section must contain the number “500”. Codes used to convey the statement in paragraph (a)(5)(v) must contain the statement “greater than 500” or “>500”.
- (e) Beginning June 1, 2001 and ending May 31, 2005, any transfer subject to this section, which is also subject to the early credit provisions of § 80.531(b), must comply with all applicable requirements of this section.
- (f) Beginning June 1, 2005 and ending May 31, 2006, any transfer subject to this section, which is also subject to the early credit requirements of § 80.531(c), must comply with all applicable requirements of this section.

45. Section 80.591 is amended to read as follows:

**§ 80.591 What are the product transfer document requirements for additives to be used in diesel fuel?**

(a) Except as provided in paragraphs (b) and (d) of this section, on each occasion that any person transfers custody or title to a diesel fuel additive to a party in the additive distribution system or in the diesel fuel distribution system for use downstream of the diesel fuel refiner, the transferor must provide to the transferee documents which identify the additive, and:

(1) Identify the name and address of the transferor and transferee; the date of transfer; the location at which the transfer took place; the volume of additive transferred; and

(2) Indicates compliance with the 15 ppm sulfur standard by inclusion of the following statement: “The sulfur content of this diesel fuel additive does not exceed 15 ppm.”

(b) On each occasion that any person transfers custody or title to a diesel fuel additive subject to the requirements of § 80.521(b), to a party in the additive distribution system or in the diesel fuel distribution system for use in diesel fuel downstream of the diesel fuel refiner, the transferor must provide to the transferee documents which identify the additive, and:

(1) Identify the name and address of the transferor and transferee; the date of transfer; the location at which the transfer took place; the volume of additive transferred; and

(2) Indicate the high sulfur potential of the additive by inclusion of the following statement:

“This diesel fuel additive may exceed the federal 15 ppm sulfur standard. Improper use of this additive may result in non-complying diesel fuel.”;

(3) Includes the following information:

(i) The additive’s maximum sulfur concentration;

(ii) The maximum recommended concentration in volume percent for use of the additive in diesel fuel; and

(iii) The contribution to the sulfur level of the fuel, in ppm, that would result if the additive is used at the maximum recommended concentration.

(c) Except for transfers of diesel fuel additives to truck carriers, retailers or wholesale purchaser-consumers, product codes may be used to convey the information required under paragraphs (a) and (b) of this section, if such codes are clearly understood by each transferee. Codes used to convey the statement in paragraph (a)(2) of this section must contain the number “15” and codes used to convey the statement in paragraph (b)(2) of this section may not contain such number.

(d) For those diesel fuel additives which are sold in containers for use by the ultimate consumer of diesel fuel, each transferor must have displayed on the additive container, in a legible and conspicuous manner, either of the following statements, as applicable:

(1) “This diesel fuel additive complies with the federal low sulfur content requirements for use in diesel motor vehicles and nonroad, locomotive, and marine diesel equipment engines.”; or

(2) For those additives sold in containers for use by the ultimate consumer, with a sulfur content in excess of 15 ppm the following statement: “This diesel fuel additive does not comply with federal ultra-low sulfur content requirements for use in model year 2007 and newer diesel motor vehicles or model year 2011 and newer diesel nonroad equipment engines.”

46. Section 80.592 is amended by revising paragraphs (a), (b)(4), and (b)(7), redesignating

paragraphs (c) through (e) as paragraphs (e) through (g) and adding new paragraphs (c) and (d) to read as follows:

**§ 80.592 What records must be kept?**

(a) Records that must be kept by parties in the motor vehicle diesel fuel and diesel fuel additive distribution systems. Beginning June 1, 2006, or for a refiner the first compliance period in which the refiner is generating early credits under § 80.531(b) or (c), whichever is earlier, any person who produces, imports, sells, offers for sale, dispenses, distributes, supplies, offers for supply, stores, or transports motor vehicle diesel fuel subject to the provisions of this subpart, must keep the following records:

- (1) The applicable product transfer documents required under §§ 80.590 and 80.591;
- (2) For any sampling and testing for sulfur content under §§ 80.580 and 80.581 for a batch of motor vehicle diesel fuel produced or imported and subject to the 15 ppm sulfur standard or any sampling and testing for sulfur content or as part of a quality assurance testing program, and any sampling and testing for the cetane index or aromatics content of motor vehicle diesel fuel or motor vehicle diesel fuel additives:
  - (i) The location, date, time and storage tank or truck identification for each sample collected;
  - (ii) The name and title of the person who collected the sample and the person who performed the testing; and
  - (iii) The results of the tests for sulfur content (including where applicable the test results with and without application of the adjustment factor under § 80.580(a)(6)) or other standard content, and the volume of product in the storage tank or container from which the sample was taken; and
- (3) The actions the party has taken, if any, to stop the sale or distribution of any motor vehicle diesel fuel found not to be in compliance with the sulfur standards specified in this subpart, and the actions the party has taken, if any, to identify the cause of any noncompliance and prevent future instances of noncompliance.

(b) \* \* \* \* \*

(4) A record designating the batch as motor vehicle diesel fuel meeting the 500 ppm sulfur standard or as motor vehicle diesel fuel meeting the 15 ppm sulfur standard.

\* \* \* \* \*

(7) Information regarding credits, kept separately for each calendar year compliance period, kept separately for each refinery and in the case of importers, kept separately for imports into each CTA, and designated as motor vehicle diesel fuel credits and kept separately from NRLM credits, as follows:

\* \* \* \* \*

(c) Records that must be kept by parties in the nonroad, locomotive, and marine diesel fuel and diesel fuel additive distribution systems. Beginning June 1, 2007, or beginning June 1, 2006 for NRLM diesel fuel produced or imported by a refiner or importer subject to the non-highway baseline starting June 1, 2006 under §§ 80.534 and 80.535, whichever is earlier, any person who produces, imports, sells, offers for sale, dispenses, distributes, supplies, offers for supply, stores, or transports nonroad, locomotive and marine diesel fuel subject to the provisions of this subpart, must keep the following records:

(1) The applicable product transfer documents required under § 80.590;

- (2) For any sampling and testing for sulfur content under §§ 80.580 and 80.581 for a batch of NRLM diesel fuel produced or imported and subject to the 15 ppm sulfur standard or any sampling and testing for sulfur content as part of a quality assurance testing program, and any sampling and testing for the cetane index, aromatics content or marker under § 80.582, of NRLM diesel fuel, NRLM fuel additives or heating oil:
- (i) The location, date, time and storage tank or truck identification for each sample collected;
  - (ii) The name and title of the person who collected the sample and the person who performed the testing;
  - (iii) The results of the tests for sulfur content (including where applicable the test results with and without application of the adjustment factor under § 80.580(a)(6)) or other standard content, and the volume of product in the storage tank or container from which the sample was taken; and
- (3) The actions the party has taken, if any, to stop the sale or distribution of any nonroad, locomotive or marine diesel fuel found not to be in compliance with the sulfur standards specified in this subpart, and the actions the party has taken, if any, to identify the cause of any noncompliance and prevent future instances of noncompliance.
- (d) Additional records to be kept by refiners and importers of nonroad, locomotive and marine diesel fuel subject to non-highway baseline, credit provisions or small refiner or hardship provisions. Beginning June 1, 2007, or June 1, 2006 pursuant to the provisions of §§ 80.534 and 80.535, as applicable, any refiner producing diesel fuel subject to a sulfur standard under §§ 80.510, 80.536, 80.554, 80.660 or 80.561 for each of its refineries, and any importer importing such diesel fuel for each area under § 80.531(a)(5), shall keep records that include the following information for each batch of NRLM diesel fuel or heating oil produced or imported:
- (1) The batch volume;
  - (2) The batch number, assigned under the batch numbering procedures under § 80.65(d)(3).
  - (3) The date of production or import.
  - (4) A record designating the batch as:
    - (i) NRLM, NR, LM or heating oil, as applicable;
    - (ii) As meeting the 500 ppm requirements of § 80.510(a), the 15 ppm requirements of § 80.510(b), the applicable standard under § 80.536, the applicable small refiner standard under § 80.554, or other applicable standard,
    - (iii) whether dyed or undyed with visible evidence of dye solvent red 164;
    - (iv) whether marked with solvent yellow 124.
  - (5) For foreign refiners, the designations and other records required to be kept under § 80.620.
  - (6) In the case of importers, the designations and other records required under § 80.592.
  - (7) Information regarding credits, kept separately for each calendar year calculation period, kept separately for each refinery and importer, and for importers, kept separately for each CTA under § 80.531(a)(5), and kept separately from motor vehicle diesel fuel credits.
    - (i) The number in the refiner's or importer's possession at the beginning of the of the calendar year;
    - (ii) The number generated;

- (iii) The number used;
  - (iv) If any were obtained from or transferred to other parties, for each other party, its name, its EPA refiner or importer registration number consistent with § 80.597, in the case of credits generated by an importer the port and CTA of import of the diesel fuel that generated the credits, and the number obtained from, or transferred to, the other party;
  - (v) The number in the refiner's or importer's possession that will carry over into the subsequent calendar year compliance period; and
  - (vi) Commercial documents that establish each transfer of credits from the transferor to the transferee.
- (8) The calculations used to determine compliance with the volume percentage requirements of this subpart;
- (9) The calculations used to determine the number of credits generated;
- (10) A copy of reports submitted to EPA under § 80.599.
- (e) Additional records importers must keep. Any importer shall keep records that identify and verify the source of each batch of certified diesel fuel program foreign refiner (DFR)-Diesel and non-certified DFR-Diesel imported and demonstrate compliance with the requirements under § 80.620.
- (f) Length of time records must be kept. The records required in this section shall be kept for five years from the date they were created, except that records relating to credit transfers shall be kept by the transferor for 5 years from the date the credits were transferred, and shall be kept by the transferee for 5 years from the date the credits were transferred, used or terminated, whichever is later.
- (g) Make records available to EPA. On request by EPA, the records required in this section must be made available to the Administrator or the Administrator's representative. For records that are electronically generated or maintained, the equipment and software necessary to read the records shall be made available, or if requested by EPA, electronic records shall be converted to paper documents which shall be provided to the Administrator's authorized representative.

47. Section 80.594 is amended by revising the section heading to read as follows:

**§ 80.594 What are the pre-compliance reporting requirements for motor vehicle diesel fuel?**

\* \* \* \* \*

48. Section 80.597 is amended to read as follows:

**§ 80.597 What are the registration requirements?**

The following registration requirements apply under this subpart:

- (a) *Registration for motor vehicle diesel fuel.* Refiners having any refinery that is subject to a sulfur standard under § 80.520(a), and importers importing such diesel fuel, must provide EPA the information under § 80.76 no later than December 31, 2001, if such information has not been provided under the provisions of 40 CFR Part 80. In addition, for each import facility, the same identifying information as required for each refinery under § 80.76(c) must be provided.

- (b) *Registration for nonroad, locomotive and marine diesel.* Refiners and importers that may produce or supply nonroad, locomotive and/or diesel fuel by June 1, 2007, must provide EPA the information under § 80.76 no later than December 31, 2004, if such information has not been provided under the provisions of 40 CFR Part 80. In addition, for each import facility, the same identifying information as required for each refinery under § 80.76(c) must be provided.

49. A new section 80.598 is added to read as follows:

**§ 80.598 What are the pre-compliance reporting requirements for nonroad, locomotive and marine diesel?**

- (a) Beginning on June 1, 2005, and for each year until June 1, 2009, or until the entity produces or imports nonroad fuel meeting the 15 ppm standard of § 80.510(b), all refiners and importers planning to produce or import nonroad, locomotive or marine diesel fuel, shall submit the following information to EPA:
- (1) Any changes to the information submitted for the company registration;
  - (2) Any changes to the information submitted for any refinery or import facility registration;
  - (3) An estimate of the annual production or importation, in gallons, of motor vehicle and nonroad, locomotive or marine fuel produced or imported at each refinery or import facility for diesel fuels produced from crude oil, and the volumes of each grade of these fuels from other sources;
  - (4) If expecting to participate in the credit trading program, estimates of the number of credits to be generated and/or used each year the program;
  - (5) Information regarding engineering plans (e.g., design and construction), the status of obtaining any necessary permits, and capital commitments for making the necessary modifications to produce low sulfur nonroad, locomotive or marine fuel, and actual construction progress. The pre-compliance reports due in 2006 and later years must provide an update of the progress in each of these areas.
- (b) Reports under this section may be submitted in conjunction with reports submitted under § 80.594.

50. A new section 80.599 is added to read as follows:

**§ 80.599 What are the annual reporting requirements for refiners and importers of nonroad, locomotive and marine diesel fuel?**

Beginning with the annual compliance period that begins June 1, 2007, or June 1, 2006 for refiners or importers who elects not to dye NRLM fuel starting June 1, 2006, any refiner or importer who produces or imports nonroad, locomotive or marine diesel fuel must submit annual compliance reports for each refinery, or for importer, that contain the information required in this section, and such other information as EPA may require.

- (a) All refiners and importers. (1) The refiner or importer's company name and the EPA company and refinery registration number, or CTA of import information.  
(2) A declaration whether the refiner or importer is electing to dye its NRLM fuel with visible evidence of dye solvent red 164 or whether it is electing to utilize the non-highway baseline under §§ 80.534-80.535 for the compliance period, and if the refiner is

a small refiner, a statement of which small refiner option it is subject to.

(b) Refiners and importers subject to the non-highway baseline. Refiners for each refinery, or for each importer separately for each CTA, that elects to not dye its NRLM fuel and instead utilize the non-highway baseline:

(1) The total volumes of the following types of fuel produced or imported during the compliance period:

(i) 15 ppm sulfur content motor vehicle diesel fuel and NRLM diesel fuel.

(ii) 500 ppm sulfur content motor vehicle diesel fuel, nonroad diesel fuel or locomotive and marine diesel fuel.

(iii) Heating oil.

(iv) High sulfur NRLM diesel fuel.

(2) The volume percentages under § 80.534 and compliance with the requirement of § 80.534(d)(2).

(c) Small refiners. (1) For each refinery of small refiners subject to the provisions of §§ 80.551(g) and 80.554(a) for each compliance period starting June 1, 2007 and ending May 31, 2010, report:

(i) The total volume of NRLM diesel fuel produced that is exempt from the sulfur standard of § 80.510(a).

(ii) The total volume NRLM diesel fuel produced as defined in § 80.534.

(iii) The volume of NRLM diesel fuel produced diesel fuel produced having a sulfur content of 500 ppm or less.

(iv) The total volume, if any, of NRLM diesel fuel subject to the 500 ppm sulfur standard that had a sulfur content exceeding 500 ppm.

(2) For each refinery of small refiners subject to the provisions of §§ 80.551(g) and 80.554(b), for each compliance period starting June 1, 2010 and ending May 31, 2014, report:

(i) The total volume of NRLM diesel fuel produced subject to the 500 ppm sulfur standard of § 80.510(a).

(ii) The total volume NRLM diesel fuel produced as defined in § 80.534.

(iii) The total volume of locomotive or marine diesel fuel marked under § 80.510(c).

(iv) The volume of NRLM diesel fuel produced having a sulfur content of 15 ppm or less. (v) The total volume, if any, of NRLM diesel fuel subject to the 15 ppm sulfur standard that had a sulfur content in excess of 15 ppm.

(3) For each refinery of a small refiner that elects to produce NRLM diesel fuel subject to the 15 ppm nonroad diesel fuel starting June 1, 2006 under §§ 80.551(g) and 80.554(d) for each compliance period report:

(i) The total volume of NRLM diesel fuel produced having a sulfur content of 15 ppm or less.

(ii) The total volume of NRLM diesel fuel produced as defined under § 80.534

(iii) The total percentage of NRLM as defined under § 80.534 produced having a sulfur content of 15 ppm or less.

(iv) The number of credits purchased, if any, to cover any deficit as provided in § 80.554(d)(3).

(v) A report of the small refiner's progress toward compliance with the gasoline standards under §§ 80.240 and 80.255.

(d) Credit generation and use. Information regarding the generation, use, transfer and

retirement of credits, separately by refinery and for importers separately by CTA, including:

- (1) The number of credits at the beginning of the compliance period;
  - (2) The number of credits generated;
  - (3) The number of credits used;
  - (4) If any credits were obtained from or transferred to other refineries or import ports, for each other refinery or importer, the name, address, the EPA company registration number, and the number of credits obtained from or transferred to the other party;
  - (5) The number of credits retired; and
  - (6) The credit balance at the start and end of the compliance period.
- (e) Batch reports. For each batch of motor vehicle diesel fuel, nonroad, locomotive and marine diesel fuel and heating oil produced or imported during the compliance period under paragraphs (b) and (c):
- (1) The batch volume.
  - (2) The batch number assigned using the batch numbering conventions under § 80.65(d)(3) and the appropriate designation under § 80.523.
  - (3) The date of production or import.
  - (4) For each batch provide the information specified in paragraph (b)(1) of this section.
  - (5) The sulfur content and cetane and aromatics content of the fuel;
  - (6) Whether the batch was dyed with visible evidence of dye solvent red 164 before leaving the refinery or import facility or was undyed.
  - (7) Certification that any batch of heating oil produced or imported under the provisions of § 80.534 starting June 1, 2006 or June 1, 2007, as applicable, through May 31, 2010 was marked with the specified chemical marker pursuant to § 80.510(c) or any batch of locomotive and marine diesel fuel produced or imported starting June 1, 2010 through May 31, 2014 was marked pursuant to § 80.510(c), before leaving the refinery or import facility.
- (f) Additional reporting requirements for importers. Importers of NRLM diesel fuel are subject to the following additional requirements:
- (1) The reporting requirements under § 80.620, if applicable.
  - (2) Importers must exclude certified DFR-Diesel from calculations under this section.
- (g) Report submission. Any report required by this section shall be:
- (1) On forms and following procedures specified by the Administrator of EPA;
  - (2) Signed and certified as meeting all the applicable requirements of this subpart by the owner or a responsible corporate officer of the refiner or importer; and
  - (3) Except for small refiners subject to § 80.554(d), submitted to EPA no later than August 31 each year for the prior June 1-May 31 period. Small refiners subject to the provisions of § 80.554(d), reports must be submitted the last day of February for the previous reporting period.
- (h) Sunset dates for reporting requirements under this section.
- (i) For small refiners under paragraph (c)(1) of this section, no reports shall be required under this section after August 31, 2010.
  - (ii) For small refiners under paragraph (c)(2) of this section, no reports shall be required under this section after August 31, 2014.
  - (iii) For small refiners under paragraph (c)(3) of this section, no reports shall be required under this section after February 28, 2010.

(iv) For all other refiners, no reports shall be required under this section after August 31, 2012.

### Exemptions

51. Section 80.600 is amended by revising the section heading and paragraphs (a), (c)(3)(iv), (c)(4)(iv), (d)(3), and (f) to read as follows:

**§ 80.600 What are the requirements for obtaining an exemption for motor vehicle diesel fuel or nonroad, locomotive or marine diesel fuel used for research, development or testing purposes?**

(a) Written request for R&D exemption. Any person may receive an exemption from the provisions of this subpart for diesel fuel used for research, development, or testing (“R&D”) purposes by submitting the information listed in paragraph (c) of this section to:

Director (6406J),  
Transportation and Regional Programs Division  
U.S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, NW,  
Washington, DC 20460 (postal mail); or

Director (6406J),  
Transportation and Regional Programs Division  
U.S. Environmental Protection Agency  
501 3rd Street, NW,  
Washington, DC 20001 (express mail/courier); and

Director (2242A),  
Air Enforcement Division,  
U.S. Environmental Protection Agency,  
Ariel Rios Building,  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460.

\* \* \* \* \*  
(c) \* \* \*  
(3) \* \* \*

(iv) The quantity of diesel fuel which does not comply with the requirements of §§ 80.520 through 80.526 for motor vehicle diesel fuel or 80.510 for nonroad, locomotive or marine diesel.

(4) \* \* \*

(iv) The manner in which the party will ensure that the R&D fuel will be segregated from motor vehicle diesel fuel or nonroad, locomotive or marine fuel, as applicable, and how fuel pumps will be labeled to ensure proper use of the R&D diesel fuel;

\* \* \* \* \*

(d) \* \* \*

(3) The R&D diesel fuel must be kept segregated from non-exempt motor vehicle diesel and/or from non-exempt nonroad, locomotive or marine fuel, as appropriate, at all points in the distribution system.

\* \* \* \* \*

(f) Effects of exemption. Motor vehicle diesel fuel or nonroad, locomotive or marine diesel fuel that is subject to an R&D exemption under this section is exempt from other provisions of this subpart provided that the fuel is used in a manner that complies with the purpose of the program under paragraph (c) of this section and the requirements of this section.

\* \* \* \* \*

52. Section 80.601 is amended to read as follows:

**§ 80.601 What requirements apply to diesel fuel for use in the Territories?**

The sulfur standards of § 80.520(a)(1) and (c) related to motor vehicle diesel fuel, and of § 80.510(a) and (b) related to nonroad, locomotive and marine diesel fuel, do not apply to diesel fuel that is produced, imported, sold, offered for sale, supplied, offered for supply, stored, dispensed, or transported for use in the Territories of Guam, American Samoa or the Commonwealth of the Northern Mariana Islands provided that such diesel fuel is:

(a) Designated by the refiner or importer as high sulfur diesel fuel only for use in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands;

(b) Used only in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands;

(c) Accompanied by documentation that complies with the product transfer document requirements of § 80.590(b)(1); and

(d) Segregated from non-exempt motor vehicle diesel fuel and/or from non-exempt nonroad, locomotive or marine diesel fuel at all points in the distribution system from the point the diesel fuel is designated as exempt fuel only for use in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, while the exempt fuel is in the United States but outside these Territories.

53. Section 80.600 is amended by revising the section heading, introductory text, and paragraphs (a) and (b)(1) through (b)(4) to read as follows:

**§ 80.602 What exemption applies to diesel fuel used in vehicles or nonroad engines having a national security exemption from motor vehicle emissions standards?**

The motor vehicle diesel fuel standards of § 80.520(a)(1), (a)(2), and (c) and the nonroad, locomotive and marine diesel standards of § 80.510(a) and (b) do not apply to diesel fuel that is produced, imported, sold, offered for sale, supplied, offered for supply, stored, dispensed, or transported for use in vehicles or nonroad equipment for which EPA has granted a national security exemption under 40 CFR § 85.1708 from motor vehicle emissions standards under 40 CFR Part 86 or from nonroad emissions standards

under 40 CFR Parts 89 or 1068, provided that such fuel is:

(a) Used only in tactical military motor vehicles or tactical military nonroad equipment having an EPA national security exemption from the motor vehicle emissions standards under 40 CFR § 85.1708 from motor vehicle emissions standards under 40 CFR Part 86 or from nonroad emissions standards under 40 CFR Part 89 or 1068; or

(b) \* \* \*

(1) Used only in vehicles or equipment identified in paragraph (a) of this section or this paragraph (b);

(2) Accompanied by product transfer documents as required under § 80.590.

(3) Segregated from non-exempt motor vehicle diesel fuel or from non-exempt nonroad, locomotive or marine diesel fuel, as applicable at all points in the distribution system;

and (4) Dispensed from a fuel pump stand, fueling truck or tank that is labeled under the provisions of § 80.570(c), 80.571, 80.572, or 80.573. Any such fuel pump stand, fueling truck or tank may also be labeled with the appropriate designation of the fuel, such as "JP-5" or "JP-8".

54. Section 80.610 is amended to read as follows:

**§ 80.610 What acts are prohibited under the diesel fuel sulfur program?**

Except as provided in 40 CFR §§ 69.51 and 69.52, and in § 80.601, No person shall:

(a) Standard, dye, marker or product segregation violation. (1) Produce, import, sell, offer for sale, dispense, supply, offer for supply, store or transport motor vehicle, nonroad, locomotive or marine diesel fuel, or heating oil that does not comply with the applicable standards, dye, or marker requirements under §§ 80.510 or 80.520 or the product segregation requirements under §§ 80.536 and 80.554.

(2) Except as provided in paragraph (a)(3) of this section, starting June 1, 2006, produce, import, sell, offer for sale, dispense, supply, offer for supply, store or transport any diesel fuel for use in motor vehicle or nonroad, locomotive or marine engines that contains greater than 0.12 milligrams per liter of solvent yellow 124.

(3) Starting June 1, 2010, produce, import, sell, offer for sale, dispense, supply, offer for supply, store or transport any diesel fuel for use in motor vehicles or nonroad engines that contains greater than 0.12 milligrams per liter of solvent yellow 124.

(4) Sell, offer for sale, dispense, supply, offer for supply, store or transport heating oil for use in nonroad, locomotive or marine engines.

(5) Sell, offer for sale, dispense, supply, offer for supply, store or transport locomotive or marine diesel fuel produced or imported under § 80.510(c)(2) for use in nonroad engines. (b) Additive violation. (1) Produce, import, sell, offer for sale, dispense, supply, offer for supply, store or transport any motor vehicle or nonroad diesel fuel additive for use at a downstream location that does not comply with the requirements under § 80.521(a) or (b), as applicable.

(2) Blend or permit the blending into motor vehicle diesel fuel or nonroad diesel fuel at a downstream location, or use, or permit the use, as motor vehicle diesel fuel or nonroad diesel fuel, of any additive which does not comply with the requirements of § 80.521(a) or (b), as applicable.

(c) Used motor oil violation. Introduce into the fuel system of model year 2007 or later diesel motor vehicles or model year 2011 or later nonroad engines or other nonroad

engines certified for the use of 15 ppm sulfur content fuel, or permit the introduction into the fuel system of such vehicles or nonroad engines of used motor oil, or used motor oil blended with diesel fuel, which does not comply with the requirements of § 80.522.

(d) Improper fuel usage violation. (1) Introduce, or permit the introduction of, diesel fuel into model year 2007 or later diesel motor vehicles, and beginning December 1, 2010 into any diesel motor vehicle, which does not comply with the standards and dye requirements of § 80.520(a) and (b);

(2) Produce, import, sell, offer for sale, dispense, offer for supply, store, or transport for use in model year 2007 or later diesel motor vehicles, or introduce or permit the introduction into such motor vehicles, motor vehicle diesel fuel that is identified as other than diesel fuel complying with the 15 ppm sulfur standard; and beginning December 1, 2010, diesel fuel for use in or introduced into any diesel motor vehicle;

(3) Introduce, or permit the introduction of, diesel fuel into nonroad engine equipment or locomotive or marine engines which does not comply with the applicable standards, dye and marker requirements of § 80.510 or § 80.511, as applicable;

(4) Produce, import, sell, offer for sale, dispense, offer for supply, store, or transport for use in model year 2011 or later nonroad equipment diesel engines or other nonroad equipment engines certified for use of 15 ppm sulfur content fuel, or introduce or permit the introduction into such nonroad equipment engines, diesel fuel that is identified as other than diesel fuel complying with the 15 ppm sulfur standard; and beginning December 1, 2014, diesel fuel for use in or introduced into any diesel nonroad equipment;

(5) Produce, import, sell, offer for sale, dispense, offer for supply, store, or transport for use in locomotive or marine engines, or introduce or permit the introduction into locomotive or marine engines, diesel fuel not complying with the 500 ppm sulfur standard, as of the applicable dates specified in §§ 80.510 and 80.511; and beginning December 1, 2010, diesel fuel for use in any locomotive or marine engines.

(e) Cause another party to violate. Cause another person to commit an act in violation of paragraphs (a) through (d) of this section.

(f) Cause violating fuel or additive to be in the distribution system. Cause motor vehicle diesel fuel, or nonroad, locomotive or marine diesel fuel, to be in the diesel fuel distribution system which does not comply with the applicable standard, dye, marker or product segregation requirements of §§ 80.536 or 80.554 and paragraphs (a)(2) and (a)(3) of this section, or cause any motor vehicle diesel fuel additive or nonroad diesel fuel additive to be in the diesel fuel additive distribution system which does not comply with the applicable sulfur, cetane, and/or aromatics standards of § 80.521.

55. Section 80.611 is amended to read as follows:

**§ 80.611 What evidence may be used to determine compliance with the prohibitions and requirements of this subpart and liability for violations of this subpart?**

(a) Compliance with sulfur, cetane, and aromatics standards and marker requirements.

Compliance with the standards in §§ 80.510, 80.520, 80.521, and 80.522 shall be determined based on the level of the applicable component or parameter, using the sampling methodologies specified in § 80.330(b), as applicable, and an approved testing

methodology under the provisions of §§ 80.580- 80.586 for sulfur ; § 80.2(w) for cetane index; § 80.2(z) for aromatic content: and § 80.582 for fuel marker. Any evidence or information, including the exclusive use of such evidence or information, may be used to establish the level of the applicable component or parameter in the diesel fuel or additive, or motor oil to be used in diesel fuel, if the evidence or information is relevant to whether that level would have been in compliance with the standard if the regulatory sampling and testing methodology had been correctly performed. Such evidence may be obtained from any source or location and may include, but is not limited to, test results using methods other than the compliance methods in this paragraph, business records, and commercial documents.

(b) Compliance with other requirements. Determination of compliance with the requirements of this subpart other than the standards described in paragraph (a) of this section and in §§ 80.510, 80.520, 80.521, and 80.522, and determination of liability for any violation of this subpart, may be based on information obtained from any source or location. Such information may include, but is not limited to, business records and commercial documents.

56. Section 80.612 is amended by revising paragraph (a) to read as follows:

**§ 80.612 Who is liable for violations of this subpart?**

(a) Persons liable for violations of prohibited acts.

(1) Standard, dye, marker, product segregation, additives, used motor oil, heating oil and introduction violations. (i) Any refiner, importer, distributor, reseller, carrier, retailer, or wholesale purchaser-consumer who owned, leased, operated, controlled or supervised a facility where a violation of §§ 80.610(a) through (d) occurred, or any other person who violates § 80.610(a) through (d), is deemed liable for the applicable violation.

(ii) Any person who causes another person to violate § 80.610(a) through (d) is liable for a violation of § 80.610(e).

(iii) Any refiner, importer, distributor, reseller, carrier, retailer, or wholesale purchaser-consumer who produced, imported, sold, offered for sale, dispensed, supplied, offered to supply, stored, transported, or caused the transportation or storage of, diesel fuel that violates § 80.610(a), is deemed in violation of § 80.610(e).

(iv) Any person who produced, imported, sold, offered for sale, dispensed, supplied, offered to supply, stored, transported, or caused the transportation or storage of a diesel fuel additive which is used in motor vehicle diesel fuel or nonroad diesel fuel that is found to violate § 80.610(a), is deemed in violation of § 80.610(e).

(2) Cause violating diesel fuel or additive to be in the distribution system. Any refiner, importer, distributor, reseller, carrier, retailer, or wholesale purchaser-consumer or any other person who owned, leased, operated, controlled or supervised a facility from which diesel fuel or additive was released into the diesel fuel or additive distribution system which does not comply with the applicable standards or dye requirements of §§ 80.510, 80.511, 80.520, 80.521, 80.536 or 80.554 is deemed in violation of § 80.610(f).

(3) Branded refiner/importer liability. Any refiner or importer whose corporate, trade, or brand name, or whose marketing subsidiary's corporate, trade, or brand name appeared at a facility where a violation of § 80.610(a) occurred, is deemed in violation of § 80.610(a).

(4) Carrier causation. In order for a diesel fuel or diesel fuel additive carrier to be liable under paragraphs (a)(1) (ii), (iii) or (iv) of this section, as applicable, EPA must demonstrate, by reasonably specific showing by direct or circumstantial evidence, that the carrier caused the violation.

(5) Parent corporation. Any parent corporation is liable for any violations of this subpart that are committed by any subsidiary.

(6) Joint venture. Each partner to a joint venture is jointly and severally liable for any violation of this subpart that occurs at the joint venture facility or is committed by the joint venture operation.

\* \* \* \* \*

57. Section 80.613 is amended to read as follows:

**§ 80.613 What defenses apply to persons deemed liable for a violation of a prohibited act under Subpart I?**

(a) Presumptive liability defenses. (1) Any person deemed liable for a violation of a prohibition under § 80.612 (a)(1)(i) or (iii), (a) (2), or (a)(3), will not be deemed in violation if the person demonstrates:

(i) The violation was not caused by the person or the person's employee or agent;

(ii) Product transfer documents account for fuel or additive found to be in violation and indicate that the violating product was in compliance with the applicable requirements when it was under the party's control;

(iii) The person conducted a quality assurance sampling and testing program, as described in paragraph (d) of this section, except for those parties subject to the provisions of paragraph (a)(1)(iv) or (v) of this section. A carrier may rely on the quality assurance program carried out by another party, including the party who owns the diesel fuel in question, provided that the quality assurance program is carried out properly. Retailers, wholesale purchaser-consumers, and ultimate consumers of diesel fuel are not required to conduct quality assurance programs;

(iv) For refiners and importers of diesel fuel subject to the 15 ppm standard under §§ 80.510(b) or 80.520(a)(1), or the 500 ppm sulfur standard under § 80.510(a), test results which:

(A) Were conducted according to an appropriate test methodology approved or designated under §§ 80.580 and 80.584-80.586; and

(B) Establish that, when it left the party's control, the sulfur content of the diesel fuel did not exceed the 15 ppm standard or the 500 ppm standard, as applicable;

(C) In lieu of testing for marker solvent yellow 124 concentration a refiner or importer may present evidence of an oversight program, including records of marker inventory, purchase and additization, and records of periodic inspection and calibration of additization equipment that ensures that marker is added to heating oil under § 80.510(c)(1) or locomotive and marine diesel fuel under § 80.510(c)(2) in the required concentration; and

(v) For refiners and importers of heating oil or LM diesel fuel subject to the marker requirements under § 80.510(c), data which demonstrates that when it left it left the parties custody, the marker content was greater than or equal to 0.6 mg/L; and

(vi) For any person who, at a downstream location, blends a diesel fuel additive subject

to the requirements of § 80.521(b) into motor vehicle diesel fuel or nonroad diesel fuel subject to the 15 ppm sulfur standard under §§ 80.520(a) or 80.510(b), except a blender who blends additives into fuel tanker trucks at a truck loading rack subject to the provisions of (d)(2) of this section, test results which are conducted subsequent to the blending of the additive into the fuel, and which comply with the requirements of paragraphs (a)(4)(iv)(A) and (B) of this section.

(2) Any party deemed liable for a violation under § 80.612(a)(1)(iv), in regard to a diesel fuel additive subject to the requirements of § 80.521(a), will not be deemed in violation if the person demonstrates that:

(i) Product transfer document(s) account for the additive in the fuel found to be in violation, which comply with the requirements under § 80.591(a), and indicate that the additive was in compliance with the applicable requirements while it was under the party's control; and

(ii) For the additive's manufacturer or importer, test results which accurately establish that, when it left the party's control, the additive in the diesel fuel determined to be in violation did not have a sulfur content in excess of 15 ppm.

(A) Analysis of the additive sulfur content pursuant paragraph (a)(2) of this section may be conducted at the time the batch was manufactured or imported, or on a sample of that batch which the manufacturer or importer retains for such purpose for a minimum of two years from the date the batch was manufactured or imported;

(B) After two years from the date the additive batch was manufactured or imported, the additive manufacturer or importer is no longer required to retain samples for the purpose of complying with the testing requirements of this paragraph (a)(2) of this section.

(C) The analysis of the sulfur content of the additive must be conducted pursuant to the requirements of § 80.580.

(3) Any person who is deemed liable for a violation under § 80.612(a)(1)(iv) with regard to a diesel fuel additive subject to the requirements of § 80.521(b), will not be deemed in violation if the person demonstrates that:

(i) The violation was not caused by the party or the party's employee or agent;

(ii) Product transfer document(s) which comply with the additive information requirements under § 80.591(b), account for the additive in the fuel found to be in violation, and indicate that the additive was in compliance with the applicable requirements while it was under the party's control;

(iii) For the additive's manufacturer or importer, test results which accurately establish that, when it left the party's control, the additive in the diesel fuel determined to be in violation was in conformity with the information on the additive product transfer document pursuant to the requirements of § 80.591(b). The testing procedures applicable under paragraph (a)(2) of this section, also apply under paragraph (a)(3) of this section; and

(b) Branded refiner defenses. In the case of a violation found at a facility operating under the corporate, trade or brand name of a refiner or importer, or a refiner's or importer's marketing subsidiary, the refiner or importer must show, in addition to the defense elements required under paragraph (a)(1) of this section, that the violation was caused by:

(1) An act in violation of law (other than the Clean Air Act or this Part 80), or an act of sabotage or vandalism;

(2) The action of any refiner, importer, retailer, distributor, reseller, oxygenate blender, carrier, retailer or wholesale purchaser-consumer in violation of a contractual agreement between the branded refiner or importer and the person designed to prevent such action, and despite periodic sampling and testing by the branded refiner or importer to ensure compliance with such contractual obligation; or

(3) The action of any carrier or other distributor not subject to a contract with the refiner or importer, but engaged for transportation of diesel fuel, despite specifications or inspections of procedures and equipment which are reasonably calculated to prevent such action.

(c) Causation demonstration. Under paragraph (a)(1) of this section for any person to show that a violation was not caused by that person, or under paragraph (b) of this section to show that a violation was caused by any of the specified actions, the person must demonstrate by reasonably specific showing, by direct or circumstantial evidence, that the violation was caused or must have been caused by another person and that the person asserting the defense did not contribute to that other person's causation.

(d) Quality assurance and testing program. To demonstrate an acceptable quality assurance program under paragraph (a)(1)(iii) of this section, a person must present evidence of the following:

(1) A periodic sampling and testing program to ensure the diesel fuel or additive the person sold, dispensed, supplied, stored, or transported, meets the applicable standards; and

(2) For those parties who, at a downstream location, blend diesel fuel additives subject to the requirements of § 80.521(b) into fuel trucks at a truck loading rack, the periodic sampling and testing program required under this subparagraph (d) must ensure, by taking into account the greater risk of noncompliance created through use of a high sulfur additive, that the diesel fuel into which the additive was blended meets the applicable standards subsequent to the blending;

(3) On each occasion when diesel fuel or additive is found not in compliance with the applicable standard:

(i) The person immediately ceases selling, offering for sale, dispensing, supplying, offering for supply, storing or transporting the non-complying product; and

(ii) The person promptly remedies the violation and the factors that caused the violation (for example, by removing the non-complying product from the distribution system until the applicable standard is achieved and taking steps to prevent future violations of a similar nature from occurring).

(4) For any carrier who transports diesel fuel or additive in a tank truck, the quality assurance program required under this paragraph (d) need not include its own periodic sampling and testing of the diesel fuel or additive in the tank truck, but in lieu of such tank truck sampling and testing, the carrier shall demonstrate evidence of an oversight program for monitoring compliance with the requirements of this subpart relating to the transport or storage of such product by tank truck, such as appropriate guidance to drivers regarding compliance with the applicable sulfur standard, product segregation and product transfer document requirements, and the periodic review of records received in the ordinary course of business concerning diesel fuel or additive quality and delivery.

58. Section 80.614 is amended to read as follows:

**§ 80.614 What penalties apply under this subpart?**

(a) Any person liable for a violation under § 80.612 is subject to civil penalties as specified in section 205 of the Clean Air Act for every day of each such violation and the amount of economic benefit or savings resulting from each violation.

(b)(1) Any person liable under § 80.612(a)(1) for a violation of an applicable standard or requirement under §§80.510, 80.511, 80.520, 80.554 or 80.524, or of causing another party to violate such standard or requirement, is subject to a separate day of violation for each and every day the non-complying diesel fuel remains any place in the distribution system.

(2) Any person liable under § 80.612(a)(2) for causing motor vehicle diesel fuel or nonroad, locomotive or marine diesel fuel, or heating oil, to be in the distribution system which does not comply with an applicable standard or requirement of §§ 80.520 80.510 or 80.511, is subject to a separate day of violation for each and every day that the non-complying diesel fuel remains any place in the diesel fuel distribution system.

(3) Any person liable under § 80.612(a)(1) for blending into diesel fuel an additive violating the applicable sulfur standard pursuant to the requirements of § 80.521(a) or (b), as appropriate, or of causing another party to so blend or add such an additive, is subject to a separate day of violation for each and every day the motor vehicle diesel fuel or nonroad diesel fuel into which the noncomplying additive was blended, remains any place in the fuel distribution system.

(4) For purposes of paragraph (b) of this section, the length of time the motor vehicle diesel fuel or nonroad, locomotive or marine diesel fuel, or heating oil in question remained in the diesel fuel distribution system is deemed to be twenty-five days, unless a person subject to liability or EPA demonstrates by reasonably specific showings, by direct or circumstantial evidence, that the non-complying motor vehicle, nonroad, locomotive or marine diesel fuel, or heating oil, remained in the distribution system for fewer than or more than twenty-five days.

(c) Any person liable under § 80.612(b) for failure to meet, or causing a failure to meet, a provision of this subpart is liable for a separate day of violation for each and every day such provision remains unfulfilled.

59. Section 80.620 is amended to read as follows:

**§ 80.620 What are the additional requirements for diesel fuel produced by foreign refineries subject to a temporary refiner compliance option, non-highway baseline, hardship provisions, or motor vehicle or nonroad locomotive and marine diesel fuel credit provisions?**

(a) Definitions. (1) A foreign refinery is a refinery that is located outside the United States, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands (collectively referred to in this section as "the United States").

(2) A foreign refiner is a person who meets the definition of refiner under § 80.2(i) for a foreign refinery.

(3) A diesel fuel program foreign refiner ("DFR") is a foreign refiner that has been approved by EPA for participation in any motor vehicle diesel fuel or nonroad,

locomotive or marine diesel fuel provision of §§ 80.530 through 80.536, 80.540, 80.552, 80.553, 80.554, 80.560 or 80.561 (collectively referred to as “diesel foreign refiner program”).

(4) "DFR-Diesel" means diesel fuel produced at a DFR refinery that is imported into the United States.

(5) "Non-DFR-Diesel" means diesel fuel that is produced at a foreign refinery that has not been approved as a DFR foreign refiner, diesel fuel produced at a DFR foreign refinery that is not imported into the United States, and diesel fuel produced at a DFR foreign refinery during a period when the foreign refiner has opted to not participate in the DFR-Diesel foreign refiner program under paragraph (c)(3) of this section.

(6) "Certified DFR-Diesel" means DFR-Diesel the foreign refiner intends to include in the foreign refinery's compliance calculations under any provisions of §§ 80.530 through 80.536, 80.540, 80.552, 80.553, 80.554, 80.560 or 80.561 and does include in these compliance calculations when reported to EPA.

(7) “Non-Certified DFR-Diesel” means DFR-Diesel fuel that a DFR foreign refiner imports to the United States that is not Certified DFR-Diesel.

(b) Baseline. For any foreign refiner to obtain approval under the diesel foreign refiner program of subpart I of this part for any refinery, it must apply for approval under the applicable provisions of subpart I of this part. To obtain approval the refiner is required, as applicable, to demonstrate a volume baseline for calendar years 1998 and 1999 for motor vehicle diesel fuel produced for use in the United States under §§ 80.595 and 80.596 or a non-highway baseline for diesel fuel and heating oil produced for use in the United States for the calendar years 2003 through 2005 under §§ 80.533 and 80.534.

(1) The refiner shall follow the procedures, applicable to volume baselines and using diesel fuel, or if applicable, heating oil, instead of gasoline, in §§ 80.91 through 80.93 to establish the volume of motor vehicle diesel fuel that was produced at the refinery and imported into the United States during 1998 and 1999 for purposes of establishing a baseline under §§ 80.595 and 80.596 or of diesel fuel and heating oil produced at the refinery and imported into the United States for the calendar years 2003 through 2005 for the purposes of establishing a baseline under § 80.533.

(2) In making determinations for foreign refinery baselines EPA will consider all information supplied by a foreign refiner, and in addition may rely on any and all appropriate assumptions necessary to make such determinations.

(3) Where a foreign refiner submits a petition that is incomplete or inadequate to establish an accurate baseline, and the refiner fails to correct this deficiency after a request for more information, EPA will not assign an individual refinery motor vehicle diesel fuel volume baseline or a non-highway baseline.

(c) General requirements for DFR foreign refiners. A foreign refiner of a refinery that is approved under the diesel foreign refiner program of 40 CFR part 80, subpart I, must designate each batch of diesel fuel produced at the foreign refinery that is exported to the United States as either Certified DFR-Diesel or as Non-Certified DFR-Diesel, except as provided in paragraph (c)(3) of this section. It must further designate all Certified DFR-Diesel as provided in § 80.523, and designate whether the diesel fuel is dyed or undyed, for heating oil whether it is marked under § 80.510(c)(1) and for locomotive or marine fuel, whether it is marked under § 80.510(c)(2). It must further designate any credits earned as either nonroad diesel credits or motor vehicle diesel credits.

- (1) In the case of Certified DFR-Diesel, the foreign refiner must meet all requirements that apply to refiners under this subpart I, except that:
- (i) For purposes of complying with the compliance option requirements of § 80.530, motor vehicle diesel fuel produced by a foreign refinery must comply separately for each Credit Trading Area of import, as defined in § 80.531(a)(5).
  - (ii) For purposes of complying with the compliance option requirements of § 80.530, credits obtained from any other refinery or from any importer must have been generated in the same Credit Trading Area as the Credit Trading Area of import of the fuel for which credits are needed to achieve compliance.
  - (iii) For purposes of generating credits under § 80.531, credits shall be generated separately by Credit Trading Area of import and shall be designated by Credit Trading Area of importation and by port of importation.
- (2) In the case of Non-Certified DFR-Diesel, the foreign refiner shall meet all the following requirements:
- (i) The designation requirements in this section.
  - (ii) The reporting requirements in this section and §§ 80.593, 80.598 and 80.599.
  - (iii) The product transfer document requirements in this section and §§ 80.590 and 80.591.
  - (iv) The prohibitions in this section and § 80.610.
- (3)(i) Any foreign refiner that has been approved to produce diesel fuel subject to the diesel foreign refiner program for a foreign refinery under subpart I may elect to classify no diesel fuel imported into the United States as DFR-Diesel provided the foreign refiner notifies EPA of the election no later than November 1 of the prior calendar year.
- (ii) An election under paragraph (c)(3)(i) of this section shall be for an entire calendar year and apply to all diesel fuel that is produced by the foreign refinery that is imported into the United States, and shall remain in effect for each succeeding year unless and until the foreign refiner notifies EPA of the termination of the election. The change in election shall take effect at the beginning of the next calendar year.
- (d) Designation, product transfer documents, and foreign refiner certification. (1) Any foreign refiner of a foreign refinery that has been approved by EPA to produce diesel fuel subject to the diesel foreign refiner program must designate each batch of DFR-Diesel as such at the time the diesel fuel is produced, unless the refiner has elected to classify no diesel fuel exported to the United States as DFR-Diesel under paragraph (c)(3) of this section.
- (2) On each occasion when any person transfers custody or title to any DFR-Diesel prior to its being imported into the United States, it must include the following information as part of the product transfer document information in this section:
- (i) Designation of the diesel fuel as Certified DFR-Diesel or as Non-Certified DFR-Diesel, and if it is Certified DFR-Diesel, further designate the fuel pursuant to § 80.523, and whether the diesel fuel is dyed or undyed, for heating oil whether it is marked under § 80.510(c)(1) and for locomotive or marine fuel, whether it is marked under § 80.510(c)(2), and all other applicable product transfer document information required under § 80.590; and
  - (ii) The name and EPA refinery registration number (under § 80.593) of the refinery where the DFR-Diesel was produced.
- (3) On each occasion when DFR-Diesel is loaded onto a vessel or other transportation

mode for transport to the United States, the foreign refiner shall prepare a certification for each batch of the DFR-Diesel that meets the following requirements.

(i) The certification shall include the report of the independent third party under paragraph (f) of this section, and the following additional information:

(A) The name and EPA registration number of the refinery that produced the DFR-Diesel;

(B) The identification of the diesel fuel as Certified DFR-Diesel or Non-Certified DFR-Diesel;

(C) The volume of DFR-Diesel being transported, in gallons;

(D) In the case of Certified DFR-Diesel:

(1) The sulfur content as determined under paragraph (f) of this section, and the applicable designations stated in paragraph (d)(2)(i) of this section; and

(2) A declaration that the DFR-Diesel is being included in the applicable compliance calculations required by the EPA under subpart I.

(ii) The certification shall be made part of the product transfer documents for the DFR-Diesel.

(e) Transfers of DFR-Diesel to non-United States markets. The foreign refiner is responsible to ensure that all diesel fuel classified as DFR-Diesel is imported into the United States. A foreign refiner may remove the DFR-Diesel classification, and the diesel fuel need not be imported into the United States, but only if:

(1)(i) The foreign refiner excludes:

(A) The volume of diesel from the refinery's compliance report under §§ 80.593 or 80.599; and

(B) In the case of Certified DFR-Diesel, the volume of the diesel fuel from the compliance report under § 80.593 or § 80.599.

(ii) The exclusions under paragraph (e)(1)(i) of this section shall be on the basis of the designations under § 80.523 and this section and volumes determined under paragraph (f) of this section; and

(2) The foreign refiner obtains sufficient evidence in the form of documentation that the diesel fuel was not imported into the United States.

(f) Load port independent sampling, testing and refinery identification. (1) On each occasion that DFR-Diesel is loaded onto a vessel for transport to the United States a foreign refiner shall have an independent third party:

(i) Inspect the vessel prior to loading and determine the volume of any tank bottoms;

(ii) Determine the volume of DFR-Diesel loaded onto the vessel (exclusive of any tank bottoms before loading);

(iii) Obtain the EPA-assigned registration number of the foreign refinery;

(iv) Determine the name and country of registration of the vessel used to transport the DFR-Diesel to the United States; and

(v) Determine the date and time the vessel departs the port serving the foreign refinery.

(2) On each occasion that Certified DFR-Diesel is loaded onto a vessel for transport to the United States a foreign refiner shall have an independent third party:

(i) Collect a representative sample of the Certified DFR-Diesel from each vessel compartment subsequent to loading on the vessel and prior to departure of the vessel from the port serving the foreign refinery;

(ii) Determine the sulfur content value for each compartment, and if applicable, the

marker content under § 80.510(c) using an approved methodology as specified in § 80.580 and § 80.582 by:

- (A) The third party analyzing each sample; or
- (B) The third party observing the foreign refiner analyze the sample;
- (iii) Review original documents that reflect movement and storage of the certified DFR-Diesel from the refinery to the load port, and from this review determine:
  - (A) The refinery at which the DFR-Diesel was produced; and
  - (B) That the DFR-Diesel remained segregated from:
    - (1) Non-DFR-Diesel and Non-Certified DFR-Diesel; and
    - (2) Other Certified DFR-Diesel produced at a different refinery;
    - (3) The independent third party shall submit a report:
      - (i) To the foreign refiner containing the information required under paragraphs (f)(1) and (f)(2) of this section, to accompany the product transfer documents for the vessel; and
      - (ii) To the Administrator containing the information required under paragraphs (f)(1) and (f)(2) of this section, within thirty days following the date of the independent third party's inspection. This report shall include a description of the method used to determine the identity of the refinery at which the diesel fuel was produced, assurance that the diesel fuel remained segregated as specified in paragraph (n)(1) of this section, and a description of the diesel fuel's movement and storage between production at the source refinery and vessel loading.
    - (4) The independent third party must:
      - (i) Be approved in advance by EPA, based on a demonstration of ability to perform the procedures required in this paragraph (f);
      - (ii) Be independent under the criteria specified in § 80.65(e)(2)(iii); and
      - (iii) Sign a commitment that contains the provisions specified in paragraph (i) of this section with regard to activities, facilities and documents relevant to compliance with the requirements of this paragraph (f).
  - (g) Comparison of load port and port of entry testing. (1)(i) Any foreign refiner and any United States importer of Certified DFR-Diesel shall compare the results from the load port testing under paragraph (f) of this section, with the port of entry testing as reported under paragraph (o) of this section, for the volume of diesel fuel and the sulfur content value; except that:
    - (ii) Where a vessel transporting Certified DFR-Diesel off loads this diesel fuel at more than one United States port of entry, and the conditions of paragraph (g)(2)(i) of this section are met at the first United States port of entry, the requirements of paragraph (g)(2) of this section do not apply at subsequent ports of entry if the United States importer obtains a certification from the vessel owner that meets the requirements of paragraph (s) of this section, that the vessel has not loaded any diesel fuel or blendstock between the first United States port of entry and the subsequent port of entry.
- (2)(i) The requirements of this paragraph (g)(2) apply if:
  - (A) The temperature-corrected volumes determined at the port of entry and at the load port differ by more than one percent; or
  - (B) The sulfur content value determined at the port of entry is higher than the sulfur content value determined at the load port, and the amount of this difference is greater than the reproducibility amount specified for the port of entry test result by the American Society of Testing and Materials (ASTM) for a test method used for testing

the port of entry sample under the provisions § 80.580.

(ii) The United States importer and the foreign refiner shall treat the diesel fuel as Non-Certified DFR-Diesel, and the foreign refiner shall exclude the diesel fuel volume from its diesel fuel volumes calculations and sulfur standard designations under § 80.523.

(h) Attest requirements. Refiners, for each calendar year, must arrange to have an attest engagement performed of the underlying documentation that forms the basis of any report required under this subpart I. The attest engagement must comply with the procedures and requirements that apply to refiners under §§ 80.125 through 80.130 and must be submitted to the Administrator of EPA by May 30 of each year for the prior calendar year. The following additional procedures shall be carried out for any foreign refiner of DFR-Diesel.

(1) The inventory reconciliation analysis under § 80.128(b) and the tender analysis under § 80.128(c) shall include Non-DFR-Diesel.

(2) Obtain separate listings of all tenders of Certified DFR-Diesel and of Non-Certified DFR-Diesel, and obtain separate listings of Certified DFR-Diesel based on whether it is 15 ppm sulfur content diesel fuel, 500 ppm sulfur content diesel fuel or high sulfur fuel having a sulfur content greater than 500 ppm (and if so, whether the fuel is marked heating oil or small refiner diesel fuel or diesel fuel produced through the use of credits). Agree the total volume of tenders from the listings to the diesel fuel inventory reconciliation analysis in § 80.128(b), and to the volumes determined by the third party under paragraph (f)(1) of this section.

(3) For each tender under paragraph (h)(2) of this section, where the diesel fuel is loaded onto a marine vessel, report as a finding the name and country of registration of each vessel, and the volumes of DFR-Diesel loaded onto each vessel.

(4) Select a sample from the list of vessels identified in paragraph (h)(3) of this section used to transport Certified DFR-Diesel, in accordance with the guidelines in § 80.127, and for each vessel selected perform the following:

(i) Obtain the report of the independent third party, under paragraph (f) of this section, and of the United States importer under paragraph (o) of this section.

(A) Agree the information in these reports with regard to vessel identification, diesel fuel volumes and sulfur content test results.

(B) Identify, and report as a finding, each occasion the load port and port of entry sulfur content and volume results differ by more than the amounts allowed in paragraph (g) of this section, and determine whether the foreign refiner adjusted its refinery calculations as required in paragraph (g) of this section.

(ii) Obtain the documents used by the independent third party to determine transportation and storage of the Certified DFR-Diesel from the refinery to the load port, under paragraph (f) of this section. Obtain tank activity records for any storage tank where the Certified DFR-Diesel is stored, and pipeline activity records for any pipeline used to transport the Certified DFR-Diesel, prior to being loaded onto the vessel. Use these records to determine whether the Certified DFR-Diesel was produced at the refinery that is the subject of the attest engagement, and whether the Certified DFR-Diesel was mixed with any Non-Certified DFR-Diesel, Non-DFR-Diesel, or any Certified DFR-Diesel produced at a different refinery.

(5)(i) Select a sample from the list of vessels identified in paragraph (h)(3) of this section used to transport certified and Non-Certified DFR-Diesel, in accordance with the

guidelines in § 80.127, and for each vessel selected perform the following:

(ii) Obtain a commercial document of general circulation that lists vessel arrivals and departures, and that includes the port and date of departure of the vessel, and the port of entry and date of arrival of the vessel. Agree the vessel's departure and arrival locations and dates from the independent third party and United States importer reports to the information contained in the commercial document.

(6) Obtain separate listings of all tenders of Non-DFR-Diesel, and perform the following:

(i) Agree the total volume and sulfur content of tenders from the listings to the diesel fuel inventory reconciliation analysis in § 80.128(b).

(ii) Obtain a separate listing of the tenders under paragraph (h)(6) of this section where the diesel fuel is loaded onto a marine vessel. Select a sample from this listing in accordance with the guidelines in § 80.127, and obtain a commercial document of general circulation that lists vessel arrivals and departures, and that includes the port and date of departure and the ports and dates where the diesel fuel was off loaded for the selected vessels. Determine and report as a finding the country where the diesel fuel was off loaded for each vessel selected.

(7) In order to complete the requirements of this paragraph (h) an auditor shall:

(i) Be independent of the foreign refiner;

(ii) Be licensed as a Certified Public Accountant in the United States and a citizen of the United States, or be approved in advance by EPA based on a demonstration of ability to perform the procedures required in §§ 80.125 through 80.130 and this paragraph (h); and

(iii) Sign a commitment that contains the provisions specified in paragraph (i) of this section with regard to activities and documents relevant to compliance with the requirements of §§ 80.125 through 80.130 and this paragraph (h).

(i) Foreign refiner commitments. Any foreign refiner shall commit to and comply with the provisions contained in this paragraph (i) as a condition to being approved for a temporary refiner diesel fuel program option.

(1) Any United States Environmental Protection Agency inspector or auditor must be given full, complete and immediate access to conduct inspections and audits of the foreign refinery.

(i) Inspections and audits may be either announced in advance by EPA, or unannounced.

(ii) Access will be provided to any location where:

(A) Diesel fuel is produced;

(B) Documents related to refinery operations are kept;

(C) Diesel fuel or blendstock samples are tested or stored; and

(D) DFR-Diesel is stored or transported between the foreign refinery and the United States, including storage tanks, vessels and pipelines.

(iii) Inspections and audits may be by EPA employees or contractors to EPA.

(iv) Any documents requested that are related to matters covered by inspections and audits must be provided to an EPA inspector or auditor on request.

(v) Inspections and audits by EPA may include review and copying of any documents related to:

(A) Refinery baseline establishment, if applicable, including the volume, sulfur content and dye status of diesel fuel, heating oil and other distillates; transfers of title or custody of any diesel fuel, heating oil or blendstocks whether DFR-Diesel or Non-DFR-Diesel,

produced at the foreign refinery during the period January 1, 1998 through the date of the refinery baseline petition or through the date of the inspection or audit if a baseline petition has not been approved, and any work papers related to refinery baseline establishment;

(B) The volume and sulfur content of DFR-Diesel;

(C) The proper classification of diesel fuel as being DFR-Diesel or as not being DFR-Diesel, or as Certified DFR-Diesel or as Non-Certified DFR-Diesel, and all other relevant designations under subpart I, including § 80.523 and this section;

(D) Transfers of title or custody to DFR-Diesel;

(E) Sampling and testing of DFR-Diesel;

(F) Work performed and reports prepared by independent third parties and by independent auditors under the requirements of this section, including work papers; and

(G) Reports prepared for submission to EPA, and any work papers related to such reports.

(vi) Inspections and audits by EPA may include taking samples of diesel fuel, heating oil, diesel fuel additives or blendstock, dyes and chemical markers and interviewing employees.

(vii) Any employee of the foreign refiner must be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.

(viii) English language translations of any documents must be provided to an EPA inspector or auditor, on request, within 10 working days.

(ix) English language interpreters must be provided to accompany EPA inspectors and auditors, on request.

(2) An agent for service of process located in the District of Columbia shall be named, and service on this agent constitutes service on the foreign refiner or any employee of the foreign refiner for any action by EPA or otherwise by the United States related to the requirements of this subpart.

(3) The forum for any civil or criminal enforcement action related to the provisions of this section for violations of the Clean Air Act or regulations promulgated thereunder shall be governed by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.

(4) United States substantive and procedural laws shall apply to any civil or criminal enforcement action against the foreign refiner or any employee of the foreign refiner related to the provisions of this section.

(5) Submitting a petition for participation in the diesel foreign refiner program or producing and exporting diesel fuel or heating oil under any such program, and all other actions to comply with the requirements of this subpart relating to participation in any diesel foreign refiner program, or to establish an individual refinery motor vehicle diesel fuel volume baseline of non-highway baseline (if applicable) constitute actions or activities that satisfy the provisions of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign refiner, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign refiner under this subpart, including conduct that violates Title 18 U.S.C. 1001 and Clean Air Act section 113(c)(2).

(6) The foreign refiner, or its agents or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors, whether EPA employees

or EPA contractors, for actions performed within the scope of EPA employment related to the provisions of this section.

(7) The commitment required by this paragraph (i) shall be signed by the owner or president of the foreign refiner business.

(8) In any case where DFR-Diesel produced at a foreign refinery is stored or transported by another company between the refinery and the vessel that transports the DFR-Diesel to the United States, the foreign refiner shall obtain from each such other company a commitment that meets the requirements specified in paragraphs (i)(1) through (7) of this section, and these commitments shall be included in the foreign refiner's petition to participate in any diesel foreign refiner program .

(j) Sovereign immunity. By submitting a petition for participation in any diesel foreign refiner program under subpart I of this part (and baseline, if applicable) under this section, or by producing and exporting diesel fuel to the United States under any such program, the foreign refiner, and its agents and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States without limitation based on sovereign immunity, with respect to actions instituted against the foreign refiner, its agents and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign refiner under subpart I of this part including conduct that violates Title 18 U.S.C. 1001 and Clean Air Act section 113(c)(2).

(k) Bond posting. Any foreign refiner shall meet the requirements of this paragraph (k) as a condition to approval for any diesel foreign refiner program under subpart I of this part.

(1) The foreign refiner shall post a bond of the amount calculated using the following equation:

$$Bond = G \times \$ 0.01$$

Where,

Bond = amount of the bond in U. S. dollars

G = the volume baseline for motor vehicle diesel fuel produced at the foreign refinery and exported to the United States, in gallons, and, if applicable, the volume  $V_{nrlm}$ , as defined in § 80.534.

(2) Bonds shall be posted by:

(i) Paying the amount of the bond to the Treasurer of the United States;

(ii) Obtaining a bond in the proper amount from a third party surety agent that is payable to satisfy United States administrative or judicial judgments against the foreign refiner, provided EPA agrees in advance as to the third party and the nature of the surety agreement; or

(iii) An alternative commitment that results in assets of an appropriate liquidity and value being readily available to the United States, provided EPA agrees in advance as to the alternative commitment.

(3) Bonds posted under this paragraph (k) shall:

(i) Be used to satisfy any judicial judgment that results from an administrative or judicial enforcement action for conduct in violation of this subpart, including where such conduct violates Title 18 U.S.C.1001 and Clean Air Act section 113(c)(2),

(ii) Be provided by a corporate surety that is listed in the United States Department of

Treasury Circular 570 “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds”, and

(iii) Include a commitment that the bond will remain in effect for at least five (5) years following the end of latest annual reporting period that the foreign refiner produces diesel fuel pursuant to the requirements of this Subpart I.

(4) On any occasion a foreign refiner bond is used to satisfy any judgment, the foreign refiner shall increase the bond to cover the amount used within 90 days of the date the bond is used.

(5) If the bond amount for a foreign refiner increases, the foreign refiner shall increase the bond to cover the shortfall within 90 days of the date the bond amount changes. If the bond amount decreases, the foreign refiner may reduce the amount of the bond beginning 90 days after the date the bond amount changes.

(l) [Reserved]

(m) English language reports. Any report or other document submitted to EPA by a foreign refiner shall be in English language, or shall include an English language translation.

(n) Prohibitions. (1) No person may combine Certified DFR-Diesel with any Non-Certified DFR-Diesel or Non-DFR-Diesel, and no person may combine Certified DFR-Diesel with any Certified DFR-Diesel produced at a different refinery, until the importer has met all the requirements of paragraph (o) of this section, except as provided in paragraph (e) of this section. No person may violate the product segregation requirements of § 80.511.

(2) No foreign refiner or other person may cause another person to commit an action prohibited in paragraph (n)(1) of this section, or that otherwise violates the requirements of this section.

(o) United States importer requirements. Any United States importer shall meet the following requirements.

(1) Each batch of imported diesel fuel and heating oil shall be classified by the importer as being DFR-Diesel or as Non-DFR-Diesel, and each batch classified as DFR-Diesel shall be further classified as Certified DFR-Diesel or as Non-certified DFR-Diesel, and each batch of Certified DFR-Diesel shall be further designated pursuant to the designation requirements of § 80.523 and this section.

(2) Diesel fuel shall be classified as Certified DFR-Diesel or as Non-Certified DFR-Diesel according to the designation by the foreign refiner if this designation is supported by product transfer documents prepared by the foreign refiner as required in paragraph (d) of this section, unless the diesel fuel is classified as Non-Certified DFR-Diesel under paragraph (g) of this section. Additionally, the importer shall comply with all requirements of subpart I applicable to importers.

(3) For each diesel fuel batch classified as DFR-Diesel, any United States importer shall perform the following procedures.

(i) In the case of both Certified and Non-Certified DFR-Diesel, have an independent third party:

(A) Determine the volume of diesel fuel in the vessel;

(B) Use the foreign refiner's DFR-Diesel certification to determine the name and EPA-assigned registration number of the foreign refinery that produced the DFR-Diesel;

(C) Determine the name and country of registration of the vessel used to transport the

DFR-Diesel to the United States; and

(D) Determine the date and time the vessel arrives at the United States port of entry.

(ii) In the case of Certified DFR-Diesel, have an independent third party:

(A) Collect a representative sample from each vessel compartment subsequent to the vessel's arrival at the United States port of entry and prior to off loading any diesel fuel from the vessel;

(B) Obtain the compartment samples; and

(C) Determine the sulfur content value, and if applicable, the marker content, of each compartment sample using an appropriate methodology as specified in §§ 80.580 or 80.582, by:

(1) The third party analyzing the sample; or

(2) The third party observing the importer analyze the sample;

(3) Any importer shall submit reports within 30 days following the date any vessel transporting DFR-Diesel arrives at the United States port of entry:

(i) To the Administrator containing the information determined under paragraph (o)(3) of this section; and

(ii) To the foreign refiner containing the information determined under paragraph (o)(3)(ii) of this section, and including identification of the port and Credit Trading Area at which the product was offloaded.

(4)(i) Any United States importer shall meet the requirements specified in §§ 80.510 and 80.520 and all other requirements of subpart I, for any imported diesel fuel or heating oil that is not classified as Certified DFR-Diesel under paragraph (o)(2) of this section.

(p) Truck Imports of Certified DFR-Diesel produced at a Foreign Refinery. (1) Any refiner whose Certified DFR-Diesel is transported into the United States by truck may petition EPA to use alternative procedures to meet the following requirements:

(i) Certification under paragraph (d)(5) of this section;

(ii) Load port and port of entry sampling and testing under paragraphs (f) and (g) of this section;

(iii) Attest under paragraph (h) of this section; and

(iv) Importer testing under paragraph (o)(3) of this section.

(2) These alternative procedures must ensure Certified DFR-Diesel remains segregated from Non-Certified DFR-Diesel and from Non-DFR-Diesel until it is imported into the United States. The petition will be evaluated based on whether it adequately addresses the following:

(i) Provisions for monitoring pipeline shipments, if applicable, from the refinery, that ensure segregation of Certified DFR-Diesel from that refinery from all other diesel fuel;

(ii) Contracts with any terminals and/or pipelines that receive and/or transport Certified DFR-Diesel, that prohibit the commingling of Certified DFR-Diesel with any of the following:

(A) Other Certified DFR-Diesel from other refineries.

(B) All Non-Certified DFR-Diesel.

(C) All Non-DFR-Diesel.

(D) All diesel fuel or heating oil products required to be segregated under subpart I.

(iii) Procedures for obtaining and reviewing truck loading records and United States import documents for Certified DFR-Diesel to ensure that such diesel fuel is only loaded into trucks making deliveries to the United States;

(iv) Attest procedures to be conducted annually by an independent third party that review loading records and import documents based on volume reconciliation, or other criteria, to confirm that all Certified DFR-Diesel remains segregated throughout the distribution system and is only loaded into trucks for import into the United States.

(3) The petition required by this section must be submitted to EPA along with the application for temporary refiner relief individual refinery diesel sulfur standard under this subpart I and this section.

(q) Withdrawal or suspension of a foreign refinery's temporary refinery flexibility program approval. EPA may withdraw or suspend a diesel refiner baseline or standard approval for a foreign refinery where:

(1) A foreign refiner fails to meet any requirement of this section,

(2) A foreign government fails to allow EPA inspections as provided in paragraph (i)(1) of this section;

(3) A foreign refiner asserts a claim of, or a right to claim, sovereign immunity in an action to enforce the requirements in this subpart; or

(4) A foreign refiner fails to pay a civil or criminal penalty that is not satisfied using the foreign refiner bond specified in paragraph (k) of this section.

(r) Early use of a foreign refiner motor vehicle diesel fuel baseline. (1) A foreign refiner may begin using an individual refinery motor vehicle diesel fuel baseline before EPA has approved the baseline, provided that:

(i) A baseline petition has been submitted as required in paragraph (b) of this section;

(ii) EPA has made a provisional finding that the baseline petition is complete;

(iii) The foreign refiner has made the commitments required in paragraph (i) of this section;

(iv) The persons who will meet the independent third party and independent attest requirements for the foreign refinery have made the commitments required in paragraphs (f)(3)(iii) and (h)(7)(iii) of this section; and

(v) The foreign refiner has met the bond requirements of paragraph (k) of this section.

(2) In any case where a foreign refiner uses an individual refinery baseline before final approval under paragraph (r)(1) of this section, and the foreign refinery baseline values that ultimately are approved by EPA are more stringent than the early baseline values used by the foreign refiner, the foreign refiner shall recalculate its compliance, *ab initio*, using the baseline values approved by the EPA, and the foreign refiner shall be liable for any resulting violation of the motor vehicle highway diesel fuel requirements.

(s) Additional requirements for petitions, reports and certificates. Any petition for approval to produce diesel fuel subject to the diesel foreign refiner program, any alternative procedures under paragraph (p) of this section, any report or other submission required by paragraphs (c), (f)(2), or (i) of this section, and any certification under paragraph (d)(3) of this section shall be:

(1) Submitted in accordance with procedures specified by the Administrator, including use of any forms that may be specified by the Administrator.

(2) Be signed by the president or owner of the foreign refiner company, or by that person's immediate designee, and shall contain the following declaration:

“I hereby certify: (1) that I have actual authority to sign on behalf of and to bind [insert name of foreign refiner] with regard to all statements contained herein; (2) that I am aware that the information contained herein is being certified, or submitted to the

United States Environmental Protection Agency, under the requirements of 40 CFR part 80, subpart I, and that the information is material for determining compliance under these regulations; and (3) that I have read and understand the information being certified or submitted, and this information is true, complete and correct to the best of my knowledge and belief after I have taken reasonable and appropriate steps to verify the accuracy thereof.

“I affirm that I have read and understand the provisions of 40 CFR part 80, subpart I, including 40 CFR 80.620 apply to [insert name of foreign refiner]. Pursuant to Clean Air Act section 113(c) and Title 18, U.S.C. 1001, the penalty for furnishing false, incomplete or misleading information in this certification or submission is a fine of up to \$10,000 U.S., and/or imprisonment for up to five years.”.

**PART 89—CONTROL OF EMISSIONS FROM NEW AND IN-USE NONROAD  
COMPRESSION-IGNITION ENGINES**

60. The authority for part 89 continues to read as follows:

Authority: 42 U.S.C. 7521, 7522, 7523, 7524, 7525, 7541, 7542, 7543, 7545, 7547, 7549, 7550,  
and 7601(a).

**Subpart A—[Amended]**

61. Section 89.2 is amended by revising the definition of “United States” to read as follows:

**§89.2 Definitions.**

\* \* \* \* \*

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

\* \* \* \* \*

**Subpart B—[Amended]**

62. Section 89.112 is amended by revising the text of paragraph (f)(1) to read as follows:

**§89.112 Oxides of nitrogen, carbon monoxide, hydrocarbon, and particulate matter  
exhaust emission standards.**

\* \* \* \* \*

(f) \* \* \*

(1) Voluntary standards. Engines may be designated “Blue Sky Series” engines by meeting the voluntary standards listed in Table 3, which apply to all certification and in-use testing, as follows:

\* \* \* \* \*

**Subpart D—[Amended]**

63. Section 89.330 is amended by adding paragraph (e) to read as follows:

**§89.330 Lubricating oil and test fuels.**

\* \* \* \* \*

(e) Low sulfur test fuel. Upon request, for model years 2006 and/or 2007, the diesel test fuel shall be the diesel test fuel specified in 40 CFR 1065.205, with the following exception: the sulfur content must be 300-500 ppm instead of 7-15 ppm, subject to the provisions of this paragraph (e).

- (1) To use this option, the manufacturer must
  - (i) Ensure that ultimate purchasers of equipment using these engines are informed that the use of fuel meeting the 500 ppm specification is recommended.
  - (ii) Provide to equipment manufacturers labels to be applied at the fuel inlet recommending 500 ppm fuel.
- (2) None of the engines in the engine family may employ sulfur-sensitive technologies.
- (3) For engines at or above 130 kW, this option may be used in 2006 and 2007. For

engines at or above 75 kW but less than 130 kW, this option may only be used in 2007.

64. A new part 1039 is added to subchapter U of chapter I, to read as follows:

## **SUBCHAPTER U—AIR POLLUTION CONTROLS**

### **PART 1039—CONTROL OF EMISSIONS FROM NEW AND IN-USE NONROAD COMPRESSION-IGNITION ENGINES**

#### **Subpart A—Overview and Applicability**

Sec.

- 1039.1 Does this part apply for my engines?
- 1039.5 Which engines are excluded from this part's requirements?
- 1039.10 How is this part organized?
- 1039.15 Do any other regulation parts apply to me?

#### **Subpart B—Emission Standards and Related Requirements**

- 1039.101 What exhaust emission standards must my engines meet?
- 1039.102 What exhaust emission standards must my engines meet before model year 2014?
- 1039.104 Are there interim provisions that apply only for a limited time?
- 1039.105 What smoke standards must my engines meet?
- 1039.107 What evaporative emissions standards and requirements apply?
- 1039.110 [Reserved]
- 1039.115 What other requirements must my engines meet?
- 1039.120 What emission-related warranty requirements apply to me?
- 1039.125 What maintenance instructions must I give to buyers?
- 1039.130 What installation instructions must I give to equipment manufacturers?
- 1039.135 How must I label and identify the engines I produce?

#### **Subpart C—Certifying Engine Families**

- 1039.201 What are the general requirements for obtaining a certificate of conformity?
- 1039.205 What must I include in my application?
- 1039.210 May I get preliminary approval before I complete my application?
- 1039.220 How do I amend the maintenance instructions in my application?
- 1039.235 What emission testing must I perform for my application for a certificate of conformity?
- 1039.240 How do I demonstrate that my engine family complies with exhaust emission standards?
- 1039.245 How do I determine deterioration factors from exhaust durability testing?
- 1039.250 What records must I keep and what reports must I send to EPA?
- 1039.255 What decisions may EPA make regarding my certificate of conformity?

#### **Subpart D—[Reserved]**

#### **Subpart E—In-use Testing**

#### **Subpart F—Test Procedures**

- 1039.501 How do I run a valid emission test?

- 1039.505 Which duty cycles do I use for steady-state testing?
- 1039.510 Which duty cycles do I use for transient testing?
- 1039.515 What are the test procedures related to not-to-exceed standards?
- 1039.520 What testing must I perform to establish deterioration factors?
- 1039.525 How do I adjust emission levels to account for infrequently regenerating aftertreatment devices?

#### **Subpart G—Special Compliance Provisions**

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Variable-Speed Engines with Maximum Power at or above 19 kW  
Appendix V to Part 1039— Nonroad Compression-ignition (CI) Transient Cycle for Constant-Speed Engines

Authority: 42 U.S.C. 7401 - 7671(q).

**Subpart A—Overview and Applicability**

**§1039.1 Does this part apply for my engines?**

- (a) The regulations in this part 1039 apply for all new, compression-ignition nonroad engines (defined in §1039.801), except as provided in §1039.5.
- (b) In certain cases, the regulations in this part 1039 apply to engines with maximum brake power at or above 250 kW that would otherwise be covered by 40 CFR part 1048. See 40 CFR 1048.620 for provisions related to this allowance.
- (c) The definition of nonroad engine in 40 CFR 1068.30 excludes certain engines used in stationary applications. These engines are not required to comply with this part, but 40 CFR 1068.101 restricts the use of stationary engines for non-stationary purposes and 40 CFR 1068.320 requires that you label imported engines that will be used in stationary applications.
- (d)(1) This part 1039 applies for all engines subject to the emissions standards specified in subpart B of this part. See 40 CFR part 89 for earlier model years.
  - (2) For the other compression-ignition engines that do not become subject to the standards specified in subpart B of this part, this part applies as follows:
    - (i) The provisions of §1039.1(c) and §1039.801 apply for stationary engines beginning January 1, 2006.
    - (ii) The provisions of §1039.620 and §1039.801 apply for engines used solely for competition beginning January 1, 2006.

**§1039.5 Which engines are excluded from this part's requirements?**

- (a) This part does not apply to the following nonroad engines:
  - (1) Locomotive engines. Locomotive engines subject to the standards of 40 CFR part 92 are not subject to the provisions of this part 1039. Locomotive engines that are not subject to the standards of 40 CFR part 92 because they have been exempted by provisions of 40 CFR part 92, other than those contained in 40 CFR 92.907, are also not subject to the provisions of this part 1039. See the provisions of 40 CFR part 92 to determine which engines are subject to the standards of that part 92.
  - (2) Marine engines. Marine engines subject to the standards of 40 CFR part 94 are not subject to the provisions of this part 1039. Marine engines that are not subject to the standards of 40 CFR part 94 because they have been exempted by provisions of 40 CFR part 94, other than those contained in 40 CFR 94.907, are also not subject to the provisions of this part 1039. See the provisions of 40 CFR part 94 to determine which engines are subject to the standards of that part 94.
  - (3) Mining engines. Engines used in underground mining or in underground mining equipment and regulated by the Mining Safety and Health Administration (MSHA) in 30 CFR parts 7, 31, 32, 36, 56, 57, 70, and 75 are not subject to the provisions of this part 1039.

- (4) Hobby engines. Engines with per-cylinder displacement of less than 50 cc are not subject to the provisions of this part 1039.
- (b) Aircraft engines are not subject to the provisions of this part 1039. See 40 CFR part 87 for engines used in aircraft.

### **§1039.10 How is this part organized?**

The regulations in this part 1039 contain provisions that affect both engine manufacturers and others. However, the requirements of this part are generally addressed to the engine manufacturer. Unless we specifically state otherwise, the term "you" means the engine manufacturer, as defined in §89.801. This part 1039 is divided into the following subparts:

- (a) Subpart B of this part describes the emission standards and other requirements that must be met to certify engines under this part. Note that §1039.104 discusses certain interim requirements and compliance provisions that apply only for a limited time.
- (b) Subpart C of this part describes how to apply for a certificate of conformity.
- (c) Subpart F of this part describes how to test your engines (including references to other parts of the Code of Federal Regulations).
- (d) Subpart G of this part and 40 CFR part 1068 describe requirements, prohibitions, and other provisions that apply to engine manufacturers, equipment manufacturers, owners, operators, rebuilders, and all others.
- (e) Subpart H of this part describes how engine manufacturers may generate and use emission credits to certify their engines.

### **§1039.15 Do any other regulation parts apply to me?**

- (a) Part 1065 of this chapter describes procedures and equipment specifications for testing engines. Subpart F of this part describes how to apply the provisions of part 1065 of this chapter to show your engines meet the emission standards in this part.
- (b) The requirements and prohibitions of part 1068 of this chapter apply to everyone, including anyone who manufactures, imports, installs, owns, operates, or rebuilds any of the engines subject to this part 1039, or equipment containing these engines. Part 1068 of this chapter describes general provisions, including these seven areas:
- (1) Prohibited acts and penalties for engine manufacturers, equipment manufacturers, and others.
  - (2) Rebuilding and other aftermarket changes.
  - (3) Exclusions and exemption for certain engines.
  - (4) Importing engines.
  - (5) Selective enforcement audits of your production.
  - (6) Defect reporting and recall.
  - (7) Procedures for hearings.
- (c) Other parts of this chapter apply if referenced in this part.

## Subpart B—Emission Standards and Related Requirements

### §1039.101 What exhaust emission standards must my engines meet?

The exhaust emission standards of this section apply for the model years noted and later. See §1039.102 and 40 CFR 89.112 for exhaust emission standards that apply to earlier model years.

- (a) Emission standards for transient testing. Transient exhaust emissions from your engines may not exceed the applicable emission standards listed in Table 1 of this section. Measure emissions using the applicable transient test procedures described in subpart F of this part.
- (b) Emission standards for steady-state testing. Steady-state exhaust emissions from your engines may not exceed the applicable emission standards listed in Table 1 of this section. Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

Table 1 of §1039.101 Tier 4 Exhaust Emissions Standards						
Engine Power	Model Year	Emissions Standard g/kW-hr				
		PM	NO <sub>x</sub>	NMHC	NO <sub>x</sub> +NMHC	CO
kW < 19 <sup>1</sup>	2008	0.40 <sup>2</sup>	-	-	7.5	6.6
19 # kW < 56	2013	0.03	-	-	4.7	5.0
56 # kW < 130	2014	0.02	0.40	0.19	-	5.0
130 # kW ≤ 560	2014	0.02	0.40	0.19	-	3.5
kW > 560	2014	0.02	0.40	0.19	-	3.5

<sup>1</sup> Paragraph (a) of this section does not apply for engines under 19 kW until model year 2013.

<sup>2</sup> See paragraph (j) of this section for provisions related to an optional PM standard for engines under 8 kW.

- (c) Averaging banking and trading. In lieu of the NO<sub>x</sub>, NO<sub>x</sub>+NMHC, or PM standards in Table 1 of this section, you may choose to include an engine family in the averaging, banking, and trading (ABT) program provided in subpart H of this part. This requires that you specify a single family emission limit (FEL) for each pollutant for each engine family included in the ABT program. These FELs are the applicable emission standards for the engine family with respect to both transient testing and steady-state testing under paragraphs (a) and (b) of this section. The FELs will also define the NTE standards for your engine family, as specified in paragraph (d) of this section. The FEL may not be higher than the limits in Table 2 of this section, except as allowed by paragraph (i) of this section.

Table 2 of §1039.101 Tier 4 FEL Caps			
Engine Power	Emission g/kW-hr		
	PM	NOx	NOx+NMHC
kW < 8	0.80	-	10.5
8 # kW < 19	0.80	-	9.5
19 # kW < 56	0.05	-	7.5
56 # kW < 130	0.04	0.80	-
130 # kW < 560	0.04	0.80	-
kW \$ 560	0.04	0.80	-

(d) Not-to-exceed standards. (1) Exhaust emissions from the engine may not exceed the applicable NTE standards. Measure emissions according to the procedures specified §1039.515.

(2) The NTE standard, rounded to the same number of decimal places as the applicable standard in Table 1 of this section, is determined from the following equation:

$$\text{NTE standard for each pollutant} = (\text{STD}) \times (\text{M})$$

Where:

(i) STD = The standard specified for that pollutant in Table 1 of this section if you certify without using ABT for that pollutant, or the FEL for that pollutant if you certify using ABT.

(ii) M = The NTE multiplier for that pollutant, as defined in paragraph (d)(3) of this section.

(3) The NTE multiplier for each pollutant equals 1.25, except in the following cases:

Table 3 of §1039.101		
If . . .	or . . .	then . . .
(i) The engine family is certified to a NOx standard less than 2.00 g/kW-hr without using ABT	The engine family is certified to a NOx FEL less than 2.00 g/kW-hr (or an NOx+NMHC FEL less than 2.20 g/kW-hr)	The multipliers for NMHC, NOx, and/or NOx+NMHC are 1.50
(ii) The engine family is certified to a PM standard less than 0.07 g/kW-hr without using ABT	The engine family is certified to a PM FEL less than 0.07 g/kW-hr	The multiplier for PM is 1.50

(4) (i) There are two sets of specifications of ambient operating regions that apply for NTE testing. You must choose one set for each engine family. You may choose separately for each engine family. You must indicate your choice of ambient operating region in your application for certification. The region that you choose will apply for all NTE testing of engines in your engine family. You must choose one of the following two ambient operating regions:

(A) All altitudes less than or equal to 5,500 feet above sea-level, during all ambient conditions (temperature and humidity).

(B) All altitudes less than or equal to 5,500 feet above sea-level, for temperatures less than or equal to the temperature determined by the following equation at the specified altitude;

$$T = -0.00254 \times A + 100$$

Where:

T = ambient air temperature in degrees Fahrenheit.

A = altitude in feet above sea-level (A is negative for altitudes below sea-level).

(ii) Temperature and humidity ranges for which correction factors are allowed are specified in 40 CFR 86.1370-2007(e).

(A) If you choose the ambient operating region specified in paragraph (c)(4)(i)(A) of this section, then the temperature and humidity ranges for which correction factors are allowed are defined under 40 CFR 86.1370-2007(e)(1).

(B) If you choose the ambient operating region specified in paragraph (c)(4)(i)(B) of this section, then the temperature and humidity ranges for which correction factors are allowed are defined under 40 CFR 86.1370-2007(e)(2).

(5) For engines equipped with exhaust-gas recirculation, the NTE emission limits of this section do not apply during cold operating conditions as specified in 40 CFR 86.1370-2007(f).

(6) For engines certified to an FEL less than 0.01 g/kW-hr PM, the PM NTE is 0.02 g/kW-hr.

(e)[Reserved]

(f) Fuel types. The exhaust emission standards in this section apply for engines using each type of fuel on which the engines in the engine family are designed to operate. You must meet the numerical emission standards for NMHC in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Diesel-fueled engines: NMHC emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Alcohol-fueled engines: THCE emissions.

(g) Useful life. (1) Your engines must meet the exhaust emission standards in paragraphs (a) through (d) of this section over their full useful life. The useful life values are shown in the following table:

Table 4 of §1039.101			
If your engine is certified as . . .	And its maximum power is . . .	And its rated speed is . . .	Then its useful life is . . .
Variable speed or constant speed	Less than 19 kW	Any speed	3,000 hours or five years, whichever comes first
Constant speed	At least 19 kW, but less than 37 kW	3,000 rpm or higher	3,000 hours or five years, whichever comes first
Constant speed	At least 19 kW, but less than 37 kW	Less than 3,000 rpm	5,000 hours or seven years, whichever comes first
Variable speed	At least 19 kW, but less than 37 kW	Any speed	5,000 hours or seven years, whichever comes first
Variable speed or constant speed	37kW or higher	Any speed	8,000 hours or ten years, whichever comes first

(2) You may request in your application for certification that we approve a shorter useful life for an engine family. We may approve a shorter useful life if we determine that these engines will rarely operate longer than the alternate useful life. Your demonstration must include documentation from in-use engines. Your demonstration must also include any overhaul interval that you recommend and any mechanical warranty that you offer for the engine.

- (h) Applicability for testing. The emission standards in this subpart apply to all testing, including certification, selective enforcement audits and in-use testing.
- (i) Alternate FEL caps. You are allowed to certify a limited number of engines to FELs higher than the caps listed in Table 2 of this section. The FEL caps shown in Table 5 of this section apply instead of the otherwise applicable FEL caps, subject to the sales limits listed in the table.

Table 5 of §1039.101 Alternate FEL Caps				
Power Category	Model Years	Maximum percentage of production that may be certified to using these alternate FEL caps	NOx FEL Cap (g/kW-hr)	PM FEL Cap (g/kW-hr)
19 # kW < 56	2013-2016	10%	Not applicable	0.30
	2017+	5%		
56 # kW <130	2012-2013	10%	Not applicable	0.40 for hp <75 0.30 for hp \$75
	2014-2015	10%	4.4 for kW <75 3.8 for kW \$75	
	2016+	5%		
130 # kW # 560	2011-2013	10%	Not applicable	0.20
	2014	10%	3.8	
	2015+	5%		
kW >560	2014-2017	10%	6.2	0.20
	2018+	5%		

- (j) Optional PM standard for engines under 8 kW. You may certify certain engines under 8 kW to the optional Tier 4 PM standard of 0.60 g/kW-hr, instead of the PM standard listed in Table 1 of this section, as described in this paragraph.
- (1) The provisions of this paragraph (j) are available only for engines with maximum engine power under 8 kW that are hand-startable, air-cooled, and direct injection. The term hand-startable generally refers to engines that are started using a hand crank or pull cord.
- (2) Engines certified under paragraphs (j)(3)(i) or (ii) may not be used to generate positive emission credits under the ABT provisions of subpart H of this part.
- (3)(i) The applicable standard for model years 2008 and 2009 under this paragraph (j) is 0.80 g/kW-hr.
- (ii) Starting with model year 2010 standard under this paragraph (j) is 0.60 g/kW-hr standard.
- (4) The FEL cap for engines certified under this paragraph (j) is 0.80 g/kW-hr.

**§1039.102 What exhaust emission standards must my engines meet before model year 2014?**

The exhaust emission standards of this section apply for the model years specified in Tables 1 through 6 of this section. See §1039.101 for exhaust emission standards that apply to later model years. See 40 CFR 89.112 for exhaust emission standards that apply to model years before those listed in the tables.

- (a) Emission standards for transient testing. Transient exhaust emissions from your engines may not exceed the applicable emission standards in Tables 1 through 6 of this section. Measure emissions using the applicable transient test procedures described in subpart F of this part. The transient standards do not apply for the following cases:
- (1) Engines less than or equal to 37 kW in model years before 2013.
  - (2) Phase-out engines over 560 kW that are certified using the carry-over provisions of §1039.235(d).
- (b) Emission standards for steady-state testing. Steady-state exhaust emissions from your engines may not exceed the applicable emission standards listed in Tables 1 through 6 of this section. Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

Table 1 of §1039.102 Interim Tier 4 Exhaust Emissions Standards for Engines $19 \leq \text{kW} < 37$			
Model Years	Emissions Standard g/kW-hr		
	PM	NO <sub>x</sub> +NMHC	CO
2008-2012	0.30	7.5	5.0

Table 2 of §1039.102 Interim Tier 4 Exhaust Emissions Standards for Engines $37 \leq \text{kW} < 56$				
	Model Years	Emissions Standard g/kW-hr		
		PM	NO <sub>x</sub> +NMHC	CO
Option #1	2008-2012	0.30	4.7	5.0
Option #2	2012 (optional)	0.03	4.7	5.0

Table 3 of §1039.102  
Interim Tier 4 Exhaust Emissions Standards for Engines  $56 \leq \text{kW} < 75$

Model years	Phase-in Option	Emissions Standard g/kW-hr				
		PM	NO <sub>x</sub>	NMHC	NO <sub>x</sub> +NMHC	CO
2012-2013	Phase-in	0.02	0.40	0.19	-	5.0
	Phase-out (No more than 50%)	0.02	-	-	4.7	5.0

Table 4 of §1039.102  
Interim Tier 4 Exhaust Emissions Standards for Engines  $75 \leq \text{kW} < 130$

Model years	Phase-in Option	Emissions Standard g/kW-hr				
		PM	NO <sub>x</sub>	NMHC	NO <sub>x</sub> +NMHC	CO
2012-2013	Phase-in	0.02	0.40	0.19	-	5.0
	Phase-out (No more than 50%)	0.02	-	-	4.0	5.0

Table 5 of §1039.102 Interim Tier 4 Exhaust Emissions Standards for Engines $130 \leq \text{kW} \leq 560$						
Model years	Phase-in Option	Emissions Standard g/kW-hr				
		PM	NO <sub>x</sub>	NMHC	NO <sub>x</sub> +NMHC	CO
2011-2013	Phase-in	0.02	0.40	0.19	-	3.5
	Phase-out (No more than 50%)	0.02	-	-	4.0	3.5

Table 6 of §1039.102 Interim Tier 4 Exhaust Emissions Standards for Engines $\text{kW} > 560$						
Model years	Phase-in Option	Emissions Standard g/kW-hr				
		PM	NO <sub>x</sub>	NMHC	NO <sub>x</sub> +NMHC	CO
2011-2013	Phase-in	0.02	0.40	0.19	-	3.5
	Phase-out (No more than 50%)	0.20	-	-	6.4	3.5

(c) Phase-in option. The following phase-in provisions apply for engines with maximum engine power of 56 kW or higher.

(1) For model years noted in Tables 3 through 6 of this section, you may certify some of your engine families to the combined NO<sub>x</sub>+NMHC standard specified in the phase-in option instead of to the separate NO<sub>x</sub> and NMHC standards otherwise specified in the applicable table.

(2) For engines with maximum engine power over 560 kW for the model years noted in Table 6 of this section, you may certify some of your engine families to the PM standard specified in the phase-in option instead of to the PM standard otherwise specified in the applicable table. Engines certified to the phase-out standards in Table 6 of this section that are not naturally aspirated are not required to meet the crankcase emission standard

in 1039.115(a).

(3) Engines certified to the phase-out standards in Tables 3 through 5 must comply with all other requirements applicable to Tier 4 engines, except as specified in paragraph (d) of this section.

(4) The combined number of engines in the engine families certified to phase-out standards may not exceed 50 percent of your U.S.-directed production volume of nonroad CI engines for that power category for any model year, except as explicitly allowed by §1039.104(c).

(d) Other provisions. The provisions of §1039.101 (c) through (i) apply with respect to the standards of this section with the following exceptions:

(1) NTE standards. NTE standards are determined relative to the standards listed in Tables 1 through 7 of this section, instead of the standards listed in Table 1 of §1039.101. There are no NTE standards for the optional phase-out standards specified in Table 6 of this section for engines over 560 kW that are certified using the carry-over provisions of §1039.235(d).

(2) The FEL caps listed in Tables 7 and 8 of this section apply instead of the FEL caps in Table 2 of §1039.101.

Table 7 of §1039.102 Interim Tier 4 FEL Caps for Engines with Maximum Engine Power Less than 56 kW and Phase-in Engines with Maximum Engine Power Greater than or Equal to 56 kW			
Engine Power	Emission g/kW-hr		
	PM	NOx	NOx+NMHC
19 # kW < 37	0.60	-	9.5
37 # kW < 56	0.40	-	7.5
56 # kW < 75	0.040	4.4	-
75 # kW ≤ 560	0.040	3.7	-
kW > 560	0.20	6.1	-

Table 8 of §1039.102 Interim Tier 4 FEL Caps for Phase-Out Engines		
Engine Power	Emissions Standard g/kW-hr	
	PM	NO <sub>x</sub> +NMHC
56 # kW < 75	0.040	7.5
75 # kW < 225	0.040	6.6
225 # kW < 560	0.040	6.4
kW \$ 560	0.54	10.5

- (e) Banked credits for 56<kW<130 engines. The provisions of this paragraph apply for model year 2012-2014 engines with maximum engine power at least 56 kW, but less than 130 kW.
- (1) You may use under subpart H of this part banked Tier 2 NO<sub>x</sub>+NMHC credits generated from engines rated at least 37 kW.
  - (2) If you optionally forego during model years 2012-2014 the use banked Tier 2 credits allowed by paragraph (e)(1) of this section, you may certify your 56≤kW<130 engines according to the alternate phase-in schedule described in this paragraph (2). You may not bank or trade any credits generated from engines certified under this paragraph (2).

Table 1 of §1065.910																
nR-1	nI-1	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6		4.284	4.207	4.147	4.099	4.06	4.027	4	3.976	3.956	3.938	3.922	3.908	3.896	3.884	3.874
7		3.866	3.787	3.726	3.677	3.637	3.603	3.575	3.55	3.529	3.511	3.494	3.48	3.467	3.455	3.445
8		3.581	3.5	3.438	3.388	3.347	3.313	3.284	3.259	3.237	3.218	3.202	3.187	3.173	3.161	3.15
9		3.374	3.293	3.23	3.179	3.137	3.102	3.073	3.048	3.025	3.006	2.989	2.974	2.96	2.948	2.936
10		3.217	3.135	3.072	3.02	2.978	2.943	2.913	2.887	2.865	2.845	2.828	2.812	2.798	2.785	2.774
11		3.095	3.012	2.948	2.896	2.854	2.818	2.788	2.761	2.739	2.719	2.701	2.685	2.671	2.658	2.646
12		2.996	2.913	2.849	2.796	2.753	2.717	2.687	2.66	2.637	2.617	2.599	2.583	2.568	2.555	2.544
13		2.915	2.832	2.767	2.714	2.671	2.635	2.604	2.577	2.554	2.533	2.515	2.499	2.484	2.471	2.459
14		2.848	2.764	2.699	2.646	2.602	2.565	2.534	2.507	2.484	2.463	2.445	2.428	2.413	2.4	2.388
15		2.79	2.707	2.641	2.588	2.544	2.507	2.475	2.448	2.424	2.403	2.385	2.368	2.353	2.34	2.328
16		2.741	2.657	2.591	2.538	2.494	2.456	2.425	2.397	2.373	2.352	2.333	2.317	2.302	2.288	2.276
17		2.699	2.614	2.548	2.494	2.45	2.413	2.381	2.353	2.329	2.308	2.289	2.272	2.257	2.243	2.23
18		2.661	2.577	2.51	2.456	2.412	2.374	2.342	2.314	2.29	2.269	2.25	2.233	2.217	2.203	2.191
19		2.628	2.544	2.477	2.423	2.378	2.34	2.308	2.28	2.256	2.234	2.215	2.198	2.182	2.168	2.155
20		2.599	2.514	2.447	2.393	2.348	2.31	2.278	2.25	2.225	2.203	2.184	2.167	2.151	2.137	2.124

Table 9 of §1039.102 Alternate Phase-In Schedule for 56≤kW<130 Engines		
Model Year	Minimum phase-in percentage	
2012	25%	
2013	25%	
2014	First nine months	25%
	Last three months	100%
2015 and later	100%	

**§1039.104 Are there interim provisions that apply only for a limited time?**

The provisions in this section apply instead of other provisions in this part. This section describes the model years for these interim provisions apply.

(a) Split Families. For the purpose of using or generating credits during the phase-in of Tier 4 standards, you may choose to split an engine family into two subfamilies (for example, one that uses credits and one that generates credits).

(1) You must indicate in the application for certification that the engine family is to be split, and may assign the numbers and configurations of engines within the respective subfamilies at any time prior to the submission of the end-of-year report. This option is not available for engine families under 56 kW.

(2) You may exclude the engines within the split family from end-of-year NOx (or NOx+NMHC) ABT calculations, provided that the family meets the standards of this paragraph (2) and neither subfamily generates credits for use by other engine families, or uses banked credits, or uses averaging credits from other engine families. All the engines in the split family must be excluded from the phase-in calculations (both from the number of engines complying with the Tier 4 emission standards being phased-in and from the total number of engines in the U.S.-directed production volume). The engines must comply with all other applicable requirements of this part.

(i) Label all the engines within the family with a single NOx FEL, as listed in the following table:

If the engine family's maximum-power range is . . .	Then the NOx FEL for the entire family is . . .
(A) At least 56 kW, but less than 130 kW	2.3 g/kW-hr.
(B) At least 130 kW, but less than 560 kW	2.0 g/kW-hr.
(C) 560 kW or higher	3.1 g/kW-hr.

(ii) For split families with maximum engine power over 560 kW, your PM FEL is 0.10 g/kW-hr.

(iii) For engines certified under the alternate phase-in schedule of

§1039.102(e)(2), the NO<sub>x</sub> FEL is 3.3 g/kW-hr.

(3) Your engines must comply with all other standards and requirements applicable to Tier 4 engines.

(b) Incentives for early introduction. You may reduce the number of engines that are required to meet the standards in §§1039.101 or 1039.102 by certifying engines to the applicable standards in §1039.101 (without using the provisions of subpart H of this part) before the model year otherwise required (either by §§1039.101 or 1039.102. This option begins in model year 2008.

(1) For engines with maximum engine power at 56 kW or higher:

If you certify . . .	To the . . .	You may reduce the number of engines in the same power category that are required to meet the . . .	In later model years by . . .
Two engines	0.020 g/kW-hr PM standard	0.020 g/kW-hr PM standard	Three engines.
Two engines	0.020 g/kW-hr PM standard, the 0.40 g/kW-hr NO <sub>x</sub> standard, and the 0.19 g/kW-hr NMHC standard	0.020 g/kW-hr PM standard, the 0.40 g/kW-hr NO <sub>x</sub> standard, and the 0.19 g/kW-hr NMHC standard	Three engines.
One engine	0.020 g/kW-hr PM standard, a 0.20 g/kW-hr NO <sub>x</sub> standard, and the 0.19 g/kW-hr NMHC standard	0.020 g/kW-hr PM standard, the 0.40 g/kW-hr NO <sub>x</sub> standard, and the 0.19 g/kW-hr NMHC standard	Two engines.

(2) For engines with maximum power less than 56 kW:

If you certify . . .	To a . . .	You may reduce the number of engines in any family with maximum power between 19 and 56 kW that are required to meet the . . .	In later model years by . . .
Two engines	0.034 g/kW-hr PM standard	0.034 g/kW-hr PM standard	Three engines.

(3) Example: If you produce 100 56-130 kW engines in 2008 that meet all of the applicable the standards listed in §1039.101, and you produced 10,000 56-130 kW engines in 2012, then only 9,850 of the engines would need to comply with the standards listed in §1039.101 in 2012.

(c) Phase-in projections. You may initially base compliance with the phase-in requirements of §1039.102 on projected U.S.-directed production volumes. This is allowed for all phase-in model years, except the last year in which less than 100 percent compliance is required. However, if your actual U.S.-directed production volume of engines that comply with the Tier 4 standards is less than the required amount, you must make up the shortfall (in terms of number of engines) before the end of the phase-in period. For example, if you plan in good faith to produce 50 percent of your projected 10,000 56-130kW engines (i.e., 5,000 engines) in 2012 in compliance with the Tier 4 NO<sub>x</sub> and NMHC standards, but are only able to produce 4,500 such engines of an actual 10,000

engines, you would need to produce an extra 500 engines in 2013 in compliance with the Tier 4 NOx and NMHC standards.

(1) For phase-in schedules other than the alternate schedule described in Table 9 of §1039.102, the deficit allowed by this paragraph (f) may not exceed 25 percent of your U.S. directed production volume.

(2) For the phase-in schedule described in Table 9 of §1039.102, the deficit allowed by this paragraph (f) may not exceed 5 percent of your U.S. directed production volume.

(d) In-use compliance levels. (1) For purposes of determining compliance after title or custody has transferred to the ultimate purchaser, for model year 2015 or earlier engines having a NOx FEL no higher than 2.0 g/kW-hr, the applicable NOx compliance limit shall be determined by adding the following adjustment to the otherwise applicable standard or FEL for NOx.

In model years . . .	If your engine's maximum power is . . .	The NOx adjustment in g/kW-hr is . . .
2012-2015	56 # kW < 130	0.13 for operating hours # 4000 0.27 for operating hours > 4000
2011-2015	kW \$ 130	0.13 for operating hours # 4000 0.27 for operating hours > 4000

(2) For model years before 2014 for engines with maximum power less than 56 kW, and model years before 2015 for engines with maximum power at 56 kW or higher, for purposes of determining compliance after title or custody has transferred to the ultimate purchaser, the applicable PM compliance limit shall be determined by adding 0.01 g/kW-hr to the otherwise applicable standard or FEL for PM.

(e) Provisions for small-volume manufacturers. Special provisions apply to you if you are a small-volume engine manufacturer subject to the requirements of this part. You must contact us before 2008 if you intend to use these provisions.

(1) You may delay complying with the following otherwise applicable Tier 4 emission standards for three model years:

(i) PM standard for engines with maximum power less than 19 kW.

(ii) NMHC+NOx standard for engines with maximum power at least 19 kW but less than 37 kW.

(ii) NMHC+NOx and PM standards for engines with maximum power at least 56 kW but less than 130 kW.

(2) For engines with maximum power at least 19 kW but less than 56 kW, if you choose to meet the interim PM standard in §1039.102 by model year 2011 (without using PM credits), you may delay complying with the Tier 4 PM standard in §1039.101 for engines with maximum power at least 19 kW but less than 56 kW for three model years.

(f) Deficiencies for NTE emission standards. (1) For the first three model years during which Tier 4 standards apply for your engines, you may ask us to accept an engine as compliant with the NTE standards even though specific requirements are not fully met. We will grant such deficiencies (i.e., compliance without meeting specific requirements) only if compliance would be infeasible or unreasonable considering such factors as, but not limited to: technical feasibility of the given hardware and lead time and production cycles, including phase-in or phase-out of engines or vehicle designs and programmed

upgrades of computers. We will approve deficiencies on an engine-model and/or horsepower-rating basis within an engine family, and each approval is applicable for a single model year. Your request must include a description of the auxiliary emission control device(s) which will be used to maintain emissions to the lowest practical level, considering the deficiency being requested, if applicable. An application for a deficiency must be made during the certification process; no deficiency will be granted to retroactively cover engines already certified.

(2) For the next four model years after the period covered by paragraph (f)(1) of this section, we may allow up to three deficiencies per engine family. The provisions of paragraphs (f)(1) of this section apply for deficiencies allowed by this paragraph (2). In determining whether to allow the additional deficiencies, we may consider any relevant factors, including the factors identified in paragraph (f)(1) of this section. If we approve additional deficiencies, we may set any additional conditions that we determine to be appropriate.

(3) Unmet requirements should not be carried over from the previous model year, except where unreasonable hardware or software modifications would be necessary to correct the deficiency, and we determine that you have demonstrated an acceptable level of effort toward compliance. The NTE deficiency should only be seen as an allowance for minor deviations from the NTE requirements. The NTE deficiency provisions allow you to apply for relief from the NTE emission requirements under limited conditions. We expect that you should have the necessary functioning emission-control hardware in place to comply with the NTE standards.

(g) Test fuels. The diesel test fuel for model years 2008 through 2010 is the diesel test fuel specified in 40 CFR 1065.205, with the following exception: the sulfur content must be 300-500 ppm instead of 7-15 ppm. This paragraph (g) also allows the early use of 7-15 ppm sulfur test fuels in certain cases.

(1) For model years 2008 through 2010, you may use the 7-15 ppm sulfur test fuel for any engine family where you can demonstrate that the engines in the family will operate only on fuel with less than 15 ppm sulfur in-use.

(2) For model years 2008 through 2010, you may use the 7-15 ppm sulfur test fuel for any engine family containing only engines with maximum engine power less than 56 kW, provided:

(i) You ensure that ultimate purchasers of equipment using these engines are informed that the use of fuel meeting the 15 ppm specification is recommended.

(ii) You provide along with your installation instructions to equipment manufacturers labels to be applied at the fuel inlet recommending 15 ppm fuel. This labeling requirement applies instead of the requirement in §1039.135(f).

(iii) None of the engines in your engine family employ sulfur-sensitive technologies.

(4) For engines certified under §1039.101(j) in model year 2010, the diesel test fuel is the diesel test fuel specified in 40 CFR 1065.205.

(h) Requirements for equipment manufacturers. The provisions of this paragraph (h) apply to equipment manufacturers that use engines certified to the Tier 3 standards under Option #2 of Table 2 of §1039.102 in any model year from 2008 to 2011. For model year 2012, you must use engines certified under Option #2 of Table 2 of §1039.102 in any product for which you previously used an engine certified to the Tier 3 standards under Option

#2 of Table 2 of §1039.102. Use of an engine in model year 2012 that was certified under Option #1 of Table 2 of §1039.102 in such equipment would be a violation of §1068.101(a)(1).

**§1039.105 What smoke standards must my engines meet?**

Your engines must have less than 22 percent opacity when measured with the smoke test procedure in §1039.501 throughout its useful life.

**§1039.107 What evaporative emissions standards and requirements apply?**

There are no evaporative emission standards for diesel-fueled engines, or engines using other nonvolatile or nonliquid fuels (for example, natural gas). If your engine uses a volatile liquid fuel, such as methanol, you must meet the evaporative emission requirements of 40 CFR part 1048 that apply to spark-ignition engines, as follows:

- (a) Follow the steps in 40 CFR 1048.245 to show that you meet the requirements of 40 CFR 1048.105.
- (b) Do the following things in your application for certification:
  - (1) Describe how your engines control evaporative emissions.
  - (2) Present test data to show your vehicles meet the evaporative emission standards we specify in subpart B of this part if you do not use design-based certification under 40 CFR 1048.245. Show these figures before and after applying deterioration factors, where applicable.

**§1039.110 [Reserved]**

**§1039.115 What other requirements must my engines meet?**

Your engines must meet the following requirements:

- (a) Crankcase emissions. Crankcase emissions may not be discharged directly into the ambient atmosphere from any engine, except as follows:
  - (1) Engines equipped with turbochargers, pumps, blowers, or superchargers for air induction may discharge crankcase emissions to the ambient atmosphere if the emissions are added to the exhaust emissions (either physically or mathematically) during all emission testing.
  - (2) If you take advantage of this exception, you must:
    - (i) Manufacture the engines so that all crankcase emission can be routed into the applicable sampling systems specified in 40 CFR part 1065.
    - (ii) Account for deterioration in crankcase emissions when determining exhaust deterioration factors.
  - (3) For the purpose of this paragraph (a), crankcase emissions that are routed to the exhaust upstream of exhaust aftertreatment during all operation are not considered to be "discharged directly into the ambient atmosphere."
- (b) [Reserved]
- (c) [Reserved]
- (d) [Reserved]
- (e) Adjustable parameters. Engines that have adjustable parameters must meet all the

requirements of this part for any adjustment in the physically adjustable range. An operating parameter is not considered adjustable if you permanently seal it or if it is not normally accessible using ordinary tools. We may require that you set adjustable parameters to any specification within the adjustable range during any testing, including certification testing, selective enforcement auditing, or in-use testing.

- (f) Prohibited controls. You may not design your engines with emission-control devices, systems, or elements of design that cause or contribute to an unreasonable risk to public health, welfare, or safety while operating. For example, this would apply if the engine emits a noxious or toxic substance it would otherwise not emit that contributes to such an unreasonable risk.
- (g) Defeat devices. You may not equip your engines with a defeat device. A defeat device is an auxiliary emission control device that reduces the effectiveness of emission controls under conditions that the engine may reasonably be expected to encounter during normal operation and use. This does not apply to auxiliary emission control devices you identify in your certification application if any of the following is true:
  - (1) The conditions of concern were substantially included in the applicable test procedures described in subpart F of this part.
  - (2) You show your design is necessary to prevent engine (or equipment) damage or accidents.
  - (3) The reduced effectiveness applies only to starting the engine.

#### **§1039.120 What emission-related warranty requirements apply to me?**

- (a) General requirements. You must warrant to the ultimate purchaser and each subsequent purchaser that the new nonroad engine, including all parts of its emission-control system, meets two conditions:
  - (1) It is designed, built, and equipped so it conforms at the time of sale to the ultimate purchaser with the requirements of this part.
  - (2) It is free from defects in materials and workmanship that may keep it from meeting these requirements.
- (b) Warranty period. Your emission-related warranty must be valid for at least as long as the minimum warranty periods listed in this paragraph (b) in hours of operation and years, whichever comes first. You may offer an emission-related warranty more generous than we require. The emission-related warranty for the engine may not be shorter than any published warranty you offer for the engine. If you provide a longer warranty (with or without charge) for any components covered in paragraph (c) of this section, you must also extend the emission-related warranty to the same degree for the same components. If an engine has no hour meter, we base the warranty periods in this paragraph (b) only on the engine's age (in years). The minimum warranty periods are shown in the following table:

If your engine is certified as . . .	And its maximum power is . . .	And its rated speed is . . .	Then its warranty period is . . .
Variable speed or constant speed	Less than 19 kW	Any speed	1,500 hours or two years, whichever comes first.
Constant speed	At least 19 kW, but less than 37 kW	3,000 rpm or higher	1,500 hours or two years, whichever comes first.
Constant speed	At least 19 kW, but less than 37 kW	Less than 3,000 rpm	3,000 hours or five years, whichever comes first.
Variable speed	At least 19 kW, but less than 37 kW	Any speed	3,000 hours or five years, whichever comes first.
Variable speed or constant speed	37kW or higher	Any speed	3,000 hours or five years, whichever comes first.

- (c) Components covered. The emission-related warranty covers all components whose failure would increase an engine's emissions. This includes components listed in 40 CFR 1068, Appendix I, and components from any other system you develop to control emissions. The emission-related warranty covers these components even if another company produces the component. Your emission-related warranty does not cover components whose failure would not increase an engine's emissions.
- (d) Limited applicability. You may deny warranty claims under this section if the operator caused the problem, as described in 40 CFR 1068.115.

### §1039.125 What maintenance instructions must I give to buyers?

Give the ultimate purchaser of each new nonroad engine written instructions for properly maintaining and using the engine, including the emission-control system. The maintenance instructions also apply to service accumulation on your test engines, as described in 40 CFR part 1065, subpart E.

- (a) Critical emission-related maintenance. Critical emission-related maintenance includes any adjustment, cleaning, repair, or replacement of air-induction, fuel-system, or ignition components, aftertreatment devices, exhaust-gas recirculation systems, crankcase ventilation valves, sensors, or electronic control units. This may also include any other component whose only purpose is to reduce emissions or whose failure will increase emissions without significantly degrading engine performance. You may schedule critical emission-related maintenance on these components if you meet the following conditions:
- (1) You may ask us to approve critical emission-related maintenance only if operators are reasonably likely to do the maintenance you call for.
  - (2) We will accept scheduled maintenance as reasonably likely to occur in use if you satisfy any of four conditions:
    - (i) You present data showing that, if a lack of maintenance increases emissions, it also unacceptably degrades the engine's performance.
    - (ii) You present survey data showing that 80 percent of engines in the field get the

maintenance you specify at the recommended intervals.

(iii) You provide the maintenance free of charge and clearly say so in maintenance instructions for the customer.

(iv) You otherwise show us that the maintenance is reasonably likely to be done at the recommended intervals.

(3) You may not schedule emission-related maintenance on the following components more frequently than the minimum intervals specified in the following table, except as specified in paragraph (a)(5) of this section:

For the following components . . .	If your engine's maximum power is . . .	The minimum interval is . . .
EGR-related filters and coolers PCV valves Fuel injector tips (cleaning only)	Any power	1,500 hours.
Fuel injectors Turbochargers Electronic engine control units (and associated sensors and actuators) Particulate traps, trap oxidizers, and related components) (cleaning and repair only) EGR system (including related components, but excluding filters and coolers)	Less than 130 kW	3,000 hours.
Catalytic converters Other add-on emission-related components	130 kW or higher	4,500 hours.

(4) If your engine family has an alternate useful life shorter than the period specified in paragraph (a)(3) of this section, you may not schedule maintenance on those components more frequently than the alternate useful life (see §1039.101(g)).

(b) Recommended additional maintenance. You may recommend any additional amount of maintenance on the components listed in paragraph (a) of this section, as long as you make clear that these maintenance steps are not necessary to keep the emission-related warranty valid. If operators do the maintenance specified in paragraph (a) of this section, but not the recommended additional maintenance, this does not allow you to disqualify them from in-use testing or deny a warranty claim.

(c) Special maintenance. You may specify more frequent maintenance to address problems related to special situations, such as atypical engine operation.

(d) Noncritical emission-related maintenance. For engine parts not listed in paragraph (a) of this section, you may schedule any amount of emission-related inspection or maintenance. But you must state clearly that these steps are not necessary to keep the emission-related warranty valid. Also, do not take these inspection or maintenance steps during service accumulation on your test engines.

(e) Maintenance that is not emission-related. For maintenance unrelated to emission controls, you may schedule any amount of inspection or maintenance. You may also take these inspection or maintenance steps during service accumulation on your test vehicles or engines. This might include adding engine oil, changing air, fuel, or oil filters, cooling system maintenance, adjustment of idle speed, governor, engine bolt torque, valve lash, injector lash, timing, or lubrication of the exhaust manifold heat control valve. This nonemission-related maintenance may be performed on durability vehicles at the least

frequent intervals that you recommend to the ultimate purchaser (not the intervals recommended for severe service).

- (f) Source of parts and repairs. Print clearly on the first page of your written maintenance instructions that any repair shop or person may maintain, replace, or repair emission-control devices and systems. Your instructions may not require components or service identified by brand, trade, or corporate name. Also, do not directly or indirectly condition your warranty on a requirement that the vehicle be serviced by your franchised dealers or any other service establishments with which you have a commercial relationship.

You may disregard the requirements in this paragraph (f) if you do one of two things:

- (1) Provide a component or service without charge under the purchase agreement.
- (2) Get us to waive this prohibition in the public's interest by convincing us the engine will work properly only with the identified component or service.

- (g) Owner's responsibility for maintenance. The owner is responsible for proper maintenance of the engine. This includes a component related to emission control but not designed for emission control, if it meets either of the following criteria:

- (1) The component was in general use on similar engines before January 1, 1990.
- (2) Failure of the component would clearly degrade the engine's performance enough that the operator would need to repair or replace it.

### **§1039.130 What installation instructions must I give to equipment manufacturers?**

- (a) If you sell an engine for someone else to install in a piece of nonroad equipment, give the buyer of the engine written instructions for installing it consistent with the requirements of this part. Include all information necessary to ensure that an engine installed this way will be in its certified configuration.
- (b) Make sure these instructions have the following information:
- (1) Include the heading: "Emission-related installation instructions".
  - (2) State: "Failing to follow these instructions when installing a certified engine in a piece of nonroad equipment violates federal law (40 CFR 1068.105(b)), subject to fines or other penalties as described in the Clean Air Act."
  - (3) Describe the instructions needed to install the exhaust system consistent with the requirements of §1039.205(s).
  - (4) [Reserved]
  - (5) Describe any limits on the range of applications needed to ensure that the engine operates consistently with your application for certification. For example, if your engines are certified only for constant-speed operation under §1039.510(a)(1), tell equipment manufacturers not to install the engines in variable-speed applications.
  - (6) Describe any other instructions to make sure the installed engine will operate according to design specifications in your application for certification. This may include, for example, instructions for installing aftertreatment devices when installing the engines.
  - (7) State: "If you install the engine in a way that makes the engine's emission control information label hard to read during normal engine maintenance, you must place a duplicate label on the vehicle, as described in 40 CFR 1068.105."
- (c) You do not need installation instructions for engines you install in your own equipment.

**§1039.135 How must I label and identify the engines I produce?**

- (a) Assign each engine a legible unique identification number and permanently and affix or engrave it (including stamping) on the engine.
- (b) At the time of manufacture, affix a permanent and legible label identifying each engine. The label must be:
  - (1) Attached in one piece so it is not removable without being destroyed or defaced.
  - (2) Durable and readable for the engine's entire life.
  - (3) Secured to a part of the engine needed for normal operation and not normally requiring replacement.
  - (4) Written in block letters in English.
- (c) The label must:
  - (1) Include the heading "EMISSION CONTROL INFORMATION".
  - (2) Include your full corporate name and trademark.
  - (3) Identify the emission-control system; your identifiers must use names and abbreviations consistent with SAE J1930 (incorporated by reference in §1039.810).
  - (4) List all requirements for fuel and lubricants.
  - (5) State the date of manufacture [MONTH and YEAR]; you may omit the date of manufacture from the emission control information label if you maintain a record of the engine manufacture dates and provide them to us upon request.
  - (6) State: "THIS ENGINE MEETS U.S. ENVIRONMENTAL PROTECTION AGENCY REGULATIONS FOR [MODEL YEAR] NONROAD COMPRESSION-IGNITION ENGINES."
  - (7) State the emission standards to which the engines are certified, or the FELs if you certify the engine using the ABT provisions of subpart H of this part.
  - (8) Include EPA's standardized designation for the engine family (and subfamily, where applicable).
  - (9) State the engine's displacement (in liters) and maximum engine power for the family. You may use the advertised power for the engine instead of the maximum engine power for the family, as long as the advertised power is within the power category for which the engine family is certified.
  - (10) State the engine's useful life (see §1039.101(g)).
  - (11) List specifications and adjustments for engine tuneups; show the proper position for the transmission during tuneup and state which accessories should be operating.
  - (12) Describe other information on proper maintenance and use.
  - (13) If your engines are certified only for constant-speed operation under §1039.510(a)(1), add to the engine label "CONSTANT-SPEED ONLY".
  - (14) You may add information to identify other emission standards that the engine meets or does not meet (such as European standards).
- (e) If there is not enough space for an emission control information label with all the required information, you may omit the information required in paragraphs (c)(3), (c)(4), and (c)(12) of this section if you print it in the owner's manual instead.
- (f) For diesel-fueled engines, label both the engine and equipment to indicate the maximum allowable sulfur level of the fuel, as described in your application for certification.
  - (1) The label should state either:
    - (i) "ULTRA LOW-SULFUR NONROAD DIESEL FUEL OR ON-HIGHWAY DIESEL FUEL ONLY (15 parts per million)"; or

(ii) "LOW-SULFUR NONROAD DIESEL FUEL, ULTRA LOW-SULFUR NONROAD DIESEL FUEL, OR ON-HIGHWAY DIESEL FUEL ONLY (500 ppm maximum)".

- (2) The equipment must be labeled near the fuel inlet. If you manufacturer the engine, but not the equipment, provide the appropriate label to the equipment manufacturer and notify the equipment manufacturer in the installation instructions. Optionally, if the equipment manufacturer chooses to install its own label, you are not required to provide the label.
- (g) You may ask us to approve modified labeling requirements in this part if you show that you are unable to meet them. We will approve your request if this is necessary and your alternate label is consistent with the requirements of this part.
- (h) If you obscure the engine label while installing the engine in the equipment, you must place a duplicate label on the equipment. If others install your engine in their equipment in a way that obscures the engine label, we require them to add a duplicate label on the equipment (see 40 CFR 1068.105); in that case, give them the number of duplicate labels they request and keep the following records:
- (1) The written request from the equipment manufacturer.
  - (2) The number of duplicate labels you send and the date you send them.

## Subpart C—Certifying Engine Families

### **§1039.201 What are the general requirements for obtaining a certificate of conformity?**

- (a) You must send us a separate application for a certificate of conformity for each engine family. A certificate of conformity is valid from the date it is issued until December 31 of the model year for which it is issued.
- (b) The application must contain all of the information required by this part and must not include false or incomplete statements or information (see §1039.255).
- (c) We may ask you to include less information than we specify in this subpart, provided that all of the specified information is maintained as required by §1039.250.
- (d) You must use good engineering judgment for all decisions related to your application (see 40 CFR 1068.5).
- (e) An authorized representative of your company must approve and sign the application.
- (f) See §1039.255 for provisions describing how we will process your application.

### **§1039.205 What must I include in my application?**

This section specifies the information that must be in you application, unless we ask you to include less information under §1039.201(c). We may require you to provide additional information to evaluate your application.

- (a) Describe the engine family's specifications and other basic parameters of the engine's design and emission controls. List the types of fuel on which your engines are designed to operate (for example, diesel fuel). For each engine configuration, list the intended maximum engine power and the associated production tolerances. If the production tolerance for maximum engine power for any configuration exceeds  $\pm 5$  percent, or if the distribution of actual maximum engine power is asymmetrically distributed around the intended maximum engine power, then you must demonstrate that you have taken reasonable steps to minimize production variability with respect to maximum engine power.
- (b) Explain how the emission-control system operates. Describe in detail all the system components for controlling exhaust emissions, including auxiliary emission control devices (AECDs) and all fuel-system components you will install on any production or test engine. For this paragraph (b), treat as separate AECDs any devices that modulate or activate differently from each other. Include all the following:
  - (1) Give a general overview of the engine, the emission-control strategies, and all AECDs.
  - (2) Describe each AECD's general purpose and function.
  - (3) Identify the parameters that each AECD senses (including measuring, estimating, calculating, or empirically deriving the values). Include equipment-based parameters and state whether you simulate them during testing with the applicable procedures.
  - (4) Describe the purpose for sensing each parameter.
  - (5) Identify the location of each sensor the AECD uses.
  - (6) Identify the threshold values for the sensed parameters that activate the AECD.
  - (7) Describe the parameters that the AECD modulates (controls) in response to any sensed parameters, including the range of modulation for each parameter, the relationship between the sensed parameters and the controlled parameters and how the

- modulation achieves the AECD's stated purpose. Use graphs and tables, as necessary.
- (8) Describe each AECD's specific calibration details. This may be in the form of data tables, graphical representations, or some other description.
- (9) Describe the hierarchy among the AECDs when multiple AECDs sense or modulate the same parameter. Describe whether the strategies interact in a comparative or additive manner and identify which AECD takes precedence in responding, if applicable.
- (10) Explain the extent to which the AECD is included in the applicable test procedures specified in subpart F of this part.
- (11) Do the following additional things for AECDs designed to protect engines or equipment:
- (i) Identify the engine and/or equipment design limits that make protection necessary and describe any damage that would occur without the AECD.
  - (ii) Describe how each sensed parameter relates to the protected components' design limits or those operating conditions that cause the need for protection.
  - (iii) Describe the relationship between the design limits/parameters being protected and the parameters sensed or calculated as surrogates for those design limits/parameters, if applicable.
  - (iv) Describe how the modulation by the AECD prevents engines and/or equipment from exceeding design limits.
  - (v) Explain why it is necessary to estimate parameters instead of measuring them directly and describe how the AECD calculates the estimated value, if applicable.
  - (vi) Describe how you calibrate the AECD modulation to activate only during conditions related to the stated need to protect components and only as needed to sufficiently protect those components.
- (c) [Reserved]
- (d) Describe the engines you selected for testing and the reasons for selecting them.
- (e) Describe the test equipment and procedures that you used, including any special or alternate test procedures you used (see §1039.501).
- (f) Describe how you operated the test engine prior to testing, including the duty cycle and the number of engine operating hours used to stabilize emission levels. Explain why the method of service accumulation was selected. Describe any scheduled maintenance you did.
- (g) List the specifications of the test fuel to show that it falls within the required ranges we specify in 40 CFR part 1065, subpart C.
- (h) Identify the engine family's useful life.
- (i) Propose maintenance and use instructions for the ultimate purchaser of each new nonroad engine (see §1039.125).
- (j) Propose emission-related installation instructions if you sell engines for someone else to install in a piece of nonroad equipment (see §1039.130).
- (k) Propose an emission control information label.
- (l) Identify the emission standards or FELs to which you are certifying engines in the engine family. Identify the of specifications of ambient operating regions that will apply for NTE testing under §1039.101(d)(4) (i).
- (m) Identify the engine family's deterioration factors and describe how you developed them (see §1039.245). Present any emission test data you used for this.

- (n) Certify that you operated your test engines as described in the application (including the test procedures, test parameters, and test fuels) to show you meet the requirements of this part.
- (o) Present emission data to show that you meet the applicable emission standards. Present emission data for hydrocarbons (NMHC or THCE, as applicable), NO<sub>x</sub>, and CO on a test engine to show your engines meet the duty-cycle emission standards we specify in §1039.101. Show these figures before and after applying regeneration factors and deterioration factors for each engine. Include test data for each type of fuel from 40 CFR part 1065, subpart C, on which you intend for engines in the engine family to operate. If we specify more than one grade of any fuel type (for example, No. 1 and No. 2 diesel fuel), you only need to submit test data for one grade, unless the regulations of this part specify otherwise for your engine. Note that §1039.235 allows you to submit an application in certain cases without new emission data.
- (p) Report all test results, including those from invalid tests or from any other tests, whether or not they were conducted according to the test procedures of subpart F of this part.
- (q) Describe all adjustable operating parameters (see §1039.115(e)), including production tolerances. Include the following in your description of each parameter:
  - (1) The nominal or recommended setting.
  - (2) The intended physically adjustable range.
  - (3) The limits or stops used to establish adjustable ranges.
  - (4) Information showing why the limits, stops, or other means of inhibiting adjustment are effective in preventing adjustment of parameters on in-use engines to settings outside the your intended physically adjustable ranges.
- (r) Provide the information to read and interpret all the information broadcast by an engine's onboard computers and electronic control modules. State that, upon request, you will give us any hardware, software, or tools we would need to do this. If you broadcast a surrogate parameter for torque values, you must provide us what we need to convert these into torque units. You may reference any appropriate publicly released standards that define conventions for these messages and parameters. Format your information consistent with publicly released standards.
- (s) Confirm that nothing will prevent sampling of exhaust emissions after engines are installed in equipment and placed in service. If this cannot be done by simply adding a 20-cm extension to the exhaust pipe, show how to sample exhaust emissions in a way that prevents diluting the exhaust sample with ambient air.
- (t) State whether your engines will be limited to constant-speed applications. If your certification is limited to constant-speed applications, describe how you will prevent use of these engines in applications for which they are not certified.
- (u) Certify that all the engines in the engine family comply with the not-to-exceed emission standards we specify in subpart B of this part for all normal operation and use when tested as specified in §1039.515. Describe in detail any testing, engineering analysis, or other information on which you base this statement.
- (v) Unconditionally certify that all the engines in the engine family comply with the requirements of this part, other referenced parts of the CFR, and the Clean Air Act.
- (w) Include estimates of U.S.-directed production volumes.
- (x) Include the information required by other subparts of this part. For example, include the information required by §1039.730, if you participate in the ABT program.

### **§1039.210 May I get preliminary approval before I complete my application?**

If you send us information before you finish the application, we will review it and make any appropriate determinations, especially for questions related to engine family definitions, deterioration factors, service accumulation testing, and maintenance. Decisions made under this section are considered to be preliminary approval, subject to final review and approval. If you request preliminary approval related to the upcoming model year or the model year after that, we will make best-efforts to make the appropriate determinations as soon as practicable. We will generally not provide preliminary approval related to a future model year more than two years ahead of time.

### **§1039.220 How do I amend the maintenance instructions in my application?**

You may amend your emission-related maintenance instructions after you submit your application for certification, as long as the amended instructions remain consistent with maintenance you performed on test engines and conform to the requirements of this part. You must send the Designated Compliance Officer a request to amend your application for certification or certificate of conformity for an engine family if you want to change the emission-related maintenance instructions in a way that could affect emissions. In your request, describe the proposed changes to the maintenance instructions. We will disapprove your request if we determine that the amended instructions are inconsistent with maintenance you performed on test engines.

- (a) If you are decreasing the specified level of maintenance, you may distribute the new maintenance instructions to your customers 30 days after we receive your request, unless we disapprove your request. We may approve a shorter time or waive this requirement.
- (b) If your requested change would not decrease the specified level of maintenance, you may distribute the new maintenance instructions anytime after you send your request. For example, this paragraph (b) would cover adding instructions to increase the frequency of a maintenance step for engines in severe-duty applications.
- (c) You do not need to request approval if you are only making minor corrections (such as correcting typographical mistakes), clarifying your maintenance instructions, or changing instructions for maintenance unrelated to emission control.

### **§1039.225 How do I amend my application or certificate to include new or modified engines?**

Before we issue you a certificate of conformity, you may amend your application to include new or modified engine configurations, subject to the provisions of this section. After we have issued your certificate of conformity, you may ask to amend your certificate to include new or modified engine configurations, subject to the provisions of this section. You must amend your application or certificate if any changes occur with respect to any information included in your application.

- (a) You must amend your application or certificate before you take either of the following actions:
  - (1) Add an engine (that is, an additional engine configuration) to an engine family. In this case, the engine added must be consistent with other engines in the engine family, with respect to the criteria listed in §1039.230.
  - (2) Make a change that may affect emissions or an emission-related part to an engine already included in an engine family.

This includes production and design changes. A change is deemed to affect emissions if it will affect emissions at any time during the engine's lifetime.

- (b) Send the Designated Compliance Officer a request to amend the application or certificate for an engine family. In your request, do all of the following:
  - (1) Describe in detail the addition or change in the engine model or configuration you intend to make.
  - (2) Include engineering evaluations or data showing that the amended engine family complies with all applicable emission standards. You may do this by showing that the original test engine is still appropriate with respect to showing compliance of the amended family with all applicable emission standards.
  - (3) If the original test engine for the engine family is not appropriate to show compliance for the new or modified nonroad engine, include new test data showing that the new or modified nonroad engine meets the requirements of this part.
- (c) We may ask for more test data or engineering evaluations. You must give us these within 30 days after we request them.
- (d) For engine families that are already covered by a certificate of conformity, we will determine whether the certificate of conformity would cover your new or modified nonroad engine. We will send you a written explanation of our decision. You may ask for a hearing if we deny your request (see §1039.820).
- (e) For engine families that are already covered by a certificate of conformity, you may start producing the new or modified nonroad engine anytime after you send us your request to amend your certificate, prior to our decision under paragraph (d) of this section. If we determine that the affected engines do not meet applicable requirements, we will notify you to cease production of the engines and to recall the engines at no expense to the owner. Choosing to produce engines under this paragraph (e) is deemed to be consent to recall all engines that we determine do not meet applicable emission standards or other requirements and to remedy the nonconformity at no expense to the owner. If you do not provide within 30 days information required under paragraph (c) of this section, you must stop producing the new or modified engines.

### **§1039.230 How do I select engine families?**

- (a) Divide your product line into families of engines that are expected to have similar emission characteristics. Your engine family is limited to a single model year.
- (b) Group engines in the same engine family if they are the same in all of the following aspects:
  - (1) The combustion cycle and fuel.
  - (2) The cooling system (water-cooled vs. air-cooled).
  - (3) Method of air aspiration.
  - (4) Method of exhaust aftertreatment (for example, catalytic converter or particulate trap).
  - (5) Combustion chamber design.
  - (6) Bore and stroke.
  - (7) Number of cylinders, (engines with aftertreatment devices only).
  - (8) Cylinder arrangement (engines with aftertreatment devices only).
  - (9) Method of control for engine operation other than governing, (i.e., mechanical or electronic).
  - (10) Power category.

- (c) You may subdivide a group of engines that is identical under paragraph (b) of this section into different engine families, if you show the expected emission characteristics are different during the useful life.
- (d) You may group engines that are not identical with respect to the things listed in paragraph (b) of this section in the same engine family if you show that their emission characteristics during the useful life will be similar.

**§1039.235 What emission testing must I perform for my application for a certificate of conformity?**

This section describes the emission testing you must perform to show compliance with the emission standards in §1039.101 (a) and (b). See §1039.205(u) regarding emission testing related to the NTE emission standards. See 40 CFR part 1065, subpart E, regarding service accumulation before emission testing

- (a) Test your emission-data engines using the procedures and equipment specified in subpart F of this part.
- (b) Select from each engine family an engine for each fuel type. Select the engine configuration with the highest fueling rate (primarily at the point of maximum torque), unless good engineering judgment indicates that a different configuration is more likely to exceed (or has emissions nearer to) an applicable emission standard. In making this selection, consider all factors expected to affect emission performance and compliance with the standards, including emission levels of all exhaust constituents, especially NO<sub>x</sub> and PM. Select the emission data test engine or engines from this configuration.
- (c) We may choose to measure emissions from any of your test engines or other engines from the engine family.
  - (1) If we do this, you must provide the test engine at the location we select. We may decide to do the testing at your plant or any other facility. If we choose to do the testing at your plant, you must schedule it as soon as possible and make available the instruments and equipment we need.
  - (2) If we measure emissions on one of your test engines, the results of that testing become the official emission results for the engine. Unless we later invalidate this data, we may decide not to consider your data in determining if your engine family meets the applicable emission standards.
  - (3) Before we test one of your engines, we may set its adjustable parameters to any point within the physically adjustable ranges (see §1039.115(e)).
  - (4) Calibrate the test engine within normal production tolerances for anything we do not consider an adjustable parameter (see §1039.205(q)).
- (d) You may ask to use emission data for an equivalent engine family from previous model years instead of doing new tests, but only if the data show that the test engine would meet all the requirements applicable for the engine family covered by the application for certification. For the purpose of this paragraph, equivalent engines families are engine families that differ only with respect to model year.
- (e) We may require you to test a second engine in addition to the engine tested under paragraph (b) of this section.
- (f) If you use an alternate testing procedure under 40 CFR 1065.10 and later testing shows that such testing does not produce results that are equivalent to the procedures specified in subpart F of this part, we may reject data you generated using the alternate procedure.

- (g) You are not required provide smoke emission data for engines having a certification PM emission level less than 0.07 g/kW-hr or a PM FEL less than 0.07 g/kW-hr.

**§1039.240 How do I demonstrate that my engine family complies with exhaust emission standards?**

- (a) For purposes of certification, your engine family is considered in compliance with the applicable numerical emission standards in §1039.101 (a) and (b) if all emission-data engines representing that family have test results showing deteriorated emission levels at or below these standards. (Note: if you participate in the ABT program in subpart H of this part, your FELs are considered to be applicable emission standards with which you must comply.)
- (b) Your engine family is deemed to not comply if any emission-data engine representing that family has test results showing a deteriorated emission level above any applicable emission standard from §1039.101 for any pollutant.
- (c) To compare emission levels from the test engine with the applicable emission standards, apply deterioration factors to the measured emission levels for each pollutant. Section 1039.245 specifies how to test your engine to develop deterioration factors that represent the deterioration expected in emissions over your engines' full useful life. Your deterioration factors must be consistent with emission increases observed from any in-use testing with similar engines. Small-volume engine manufacturers may use assigned deterioration factors that we establish. Apply the deterioration factors as follows:
  - (1) If you use aftertreatment technology (other than particulate traps) to control emissions of a pollutant, the deterioration factor for that pollutant is the ratio of exhaust emissions at the end of useful life to exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by multiplying the measured emissions by the deterioration factor. If the factor is less than one, use one. This provision does not apply for smoke emissions. Multiplicative DFs must be specified to one more significant figure than the applicable standard.
  - (2) If you use particulate traps or if you use no aftertreatment technology to control emissions of a pollutant, the deterioration factor for that pollutant is the difference between exhaust emissions at the end of useful life and exhaust emissions at the low-hour test point. Adjust the official emission results for each tested engine at the selected test point by adding the factor to the measured emissions. If the factor is less than zero, use zero. Deterioration factors for smoke emission are always additive. Additive DFs must be specified to one more decimal place than the applicable standard.
  - (3) If your engine vents crankcase emissions to the exhaust or to the atmosphere, you must account for crankcase emission deterioration, using good engineering judgment. You may use separate factors for crankcase emissions (either multiplicative or additive) or include the effects in combined exhaust and crankcase factors.
- (d) After adjusting the emission levels for deterioration, round them to the same number of decimal places as the emission standard. Compare the rounded emission levels to the emission standard for each test engine.
- (e) For engines subject to NMHC standards, you may base compliance on total hydrocarbon (THC) emissions. Indicate in your application for certification if you are using this option. If you do, measure THC emissions and calculate NMHC emissions as 98 percent of THC emissions:

$$\text{NMHC} = (0.98) \times (\text{THC}).$$

**§1039.245 How do I determine deterioration factors from exhaust durability testing?**

Determine deterioration factors (DFs) to show that your engines will meet emission standards throughout the useful life, as described in §§1039.101 and 1039.240. This section describes how to determine deterioration factors, either with an engineering analysis, with pre-existing test data, or with new emission measurements. If you are required to perform durability testing, see §1039.220 for limitations on the maintenance that you may perform on your test engine. You must determine a separate DF for each pollutant.

- (a) You may ask us to approve deterioration factors for an engine family with established technology based on engineering analysis instead of testing. Established technology refers to engines for which the applicable NMHC+NO<sub>x</sub> standard or FEL is greater than the Tier 3 NMHC+NO<sub>x</sub> standard described in 40 CFR §89.112, unless the engines use exhaust-gas recirculation or aftertreatment. Established technology also refers to engines for which the applicable NMHC+NO<sub>x</sub> standard or FEL is less than or equal to the Tier 3 NMHC+NO<sub>x</sub> standard if you can show that the engines do not have technologies other than those generally used on engines meeting NMHC+NO<sub>x</sub> standards less stringent than the Tier 3 standards.
- (b) You may ask us to approve deterioration factors for an engine family based on emission measurements from similar highway or nonroad engines if you have already given us this data for certifying the other engines in the same or previous model years. Use good engineering judgment to decide whether the two engines are similar. We will approve your request if you show us that the emission measurements from other engines reasonably represent in-use deterioration for the nonroad engine family.
- (c) If you are unable to determine deterioration factors for an engine family under paragraph (a) or (b) of this section, select engines, subsystems, or components for testing. Determine deterioration factors based on service accumulation and related testing to represent the deterioration expected from in-use engines over the full useful life. You must measure emissions from the test engine at least three times with evenly spaced intervals of service accumulation. You may use extrapolation to determine deterioration factors once you have established a trend of increasing emissions with age for each pollutant. You may use an engine installed in nonroad equipment to accumulate service hours instead of running the engine only in the laboratory. Use good engineering judgment for all aspects of the effort to establish deterioration factors under this paragraph (c).
- (d) Include the following information in your application for certification (see §1039.205(n)):
  - (1) If you use test data from a different engine family, explain why this is appropriate and include all the emission measurements on which you base the deterioration factor.
  - (2) If you determine your deterioration factors based on engineering analysis, explain why this is appropriate and include a statement that all data, analyses, evaluations, and other information you used are available for our review upon request.
  - (3) If you conduct testing to determine deterioration factors, describe the form and extent of service accumulation, including a rationale for selecting the service-accumulation period and the method you use to accumulate hours.

**§1039.250 What records must I keep and what reports must I send to EPA?**

- (a) Within 30 days after the end of the model year, send the Designated Compliance Officer a report describing how many engines you produced in each engine family during the model year. You must report the total number of engines you produced by maximum brake power, total displacement, and the type of fuel system. We may also ask you to give us production figures for each assembly plant if you produce engines at more than one plant. If you produced exempted engines under the provisions of §1039.625, include in your report the number of exempted engines you produced for each engine model and identify the buyer or shipping destination for each exempted engine.
- (b) Organize and maintain the following records:
  - (1) A copy of all applications and any summary information you sent us.
  - (2) Any of the information we specify in §1039.205 that you were not required to include in your application.
  - (3) A detailed history of each emission-data engine. For each engine, describe all of the following:
    - (i) The test engine's construction, including its origin and buildup, steps you took to ensure that it represents production engines, any components you built specially for it, and all emission-related components.
    - (ii) How you accumulated engine operating hours (service accumulation), including the dates and the number of hours accumulated.
    - (iii) All maintenance, including modifications, parts changes, and other service, and the dates and reasons for the maintenance.
    - (iv) All your emission tests, including documentation on routine and standard tests, as specified in part 40 CFR part 1065, and the date and purpose of each test.
    - (v) All tests to diagnose engine or emission-control performance, giving the date and time of each and the reasons for the test.
    - (vi) Any other significant events.
  - (4) If we ask, you must give us projected production figures for an engine family. We may ask you to divide your production figures by maximum brake power, total displacement, or assembly plant.
  - (5) Emission test results from durability testing, and the information required by §1039.245(d).
  - (5) Keep a list of engine identification numbers for all the engines you produce under each certificate of conformity.
- (b) Keep data from routine emission tests (such as test cell temperatures and relative humidity readings) for one year after we issue the associated certificate of conformity. Keep all other information specified in paragraph (a) of this section for eight years after we issue your certificate.
- (c) Store these records in any format and on any media, as long as you can promptly send us organized, written records in English if we ask for them. You must keep these records readily available. We may review them at any time.
- (d) Send us copies of any engine maintenance instructions or explanations if we ask for them.

**§1039.255 What decisions may EPA make regarding my certificate of conformity?**

- (a) If we determine your application is complete and shows that the engine family meets all the requirements of this part and the Act, we will issue a certificate of conformity for your engine family for that model year. We may make the approval subject to additional conditions.
- (b) We may deny your application for certification if we determine that your engine family fails to comply with emission standards or other requirements of this part or the Act. Our decision may be based on a review of all information available to us. If we deny your application, we will explain why in writing.
- (c) In addition, we may deny your application or suspend or revoke your certificate if you do any of the following:
  - (1) Refuse to comply with any testing or reporting requirements.
  - (2) Submit false or incomplete information (paragraph (e) of this section applies if this is fraudulent).
  - (3) Render inaccurate any test data.
  - (4) Deny us from completing authorized activities despite our presenting a warrant or court order (see 40 CFR 1068.20). This includes a failure to provide reasonable assistance.
  - (5) Produce engines for importation into the United States at a location where local law prohibits us from carrying out authorized activities.
  - (6) Fail to supply requested information or amend your application to include all engines being produced.
  - (7) Take any action that otherwise circumvents the intent of the Act or this part.
- (d) We may void your certificate if you do not keep the records we require or do not give us information when we ask for it.
- (e) We may void your certificate if we find that you intentionally submitted false or incomplete information.
- (f) If we deny your application or suspend, revoke, or void your certificate, you may ask for a hearing (see §1039.820).

**Subpart D—[Reserved]**

**Subpart E—In-use Testing**

We may conduct in-use testing of any engine subject to the standards of this part. However, we will limit recall testing to the first 75 percent of each engine's useful life as specified in §1039.101(g).

## Subpart F—Test Procedures

### §1039.501 How do I run a valid emission test?

- (a) Use the equipment and procedures for compression-ignition engines in 40 CFR part 1065 to determine whether engines meet the duty-cycle emission standards in §1039.101(a) and (b). Measure the emissions of CO<sub>2</sub> and all the pollutants we regulate in §1039.101 using the applicable sampling procedures in 40 CFR part 1065. Use the applicable duty cycles specified in §§1039.505 and 1039.510.
- (b) Section 1039.515 describes the supplemental procedures for evaluating whether engines meet the not-to-exceed emission standards in §1039.101(c).
- (c) Use the equipment and procedures in ISO 8178-9 for evaluating whether engines meet the smoke standards in §1039.105.
- (d) Use the fuels specified in 40 CFR part 1065, subpart C, to conduct valid tests, except as noted in §1039.515.
  - (1) Use these test fuels or any commercially available fuel for service accumulation.
  - (2) For diesel-fueled engines, choose one of the diesel fuels in 40 CFR part 1065, subpart C, for emission testing. Identify this test fuel in your application for certification and ensure that the emission control information label is consistent with your selection of the test fuel (see §1039.135(f)). For example, do not test with 15 ppm sulfur fuel if you intend to label your engines to allow 500 ppm sulfur fuel.
- (e) You may use special or alternate procedures to the extent we allow them under 40 CFR 1065.10.
- (f) This subpart part is addressed to you as a manufacturer, but it applies equally to anyone who does testing for you, and to us when we conduct testing to determine if your engines meet emission standards.

### §1039.505 Which duty cycles do I use for steady-state testing?

- (a) Measure emissions by testing the engine on a dynamometer with one of the following steady-state duty cycles to determine whether it meets the steady-state emission standards in §1039.101(b):
  - (1) Use the 5-mode duty cycle described in Appendix I of this part for engines that you will certify only for constant-speed operation.
  - (2) [Reserved]
  - (3) Use the 6-mode duty cycle described in Appendix III of this part for engines with maximum power below 19 kW whose certification will not be limited to constant-speed applications.
  - (4) Use the 8-mode duty cycle described in Appendix IV of this part for engines with maximum power at or above 19 kW whose certification will not be limited to constant-speed applications.
- (b) During idle mode, operate the engine with the following parameters:
  - (1) Hold the speed within your specifications.
  - (2) Set the engine to operate at its minimum fueling rate.
  - (3) Keep engine torque under 5 percent of maximum test torque.
- (c) For full-load operating modes, operate the engine at its maximum fueling rate.
- (d) See 40 CFR part 1065 for detailed specifications of tolerances and calculations.

- (e) In the normal test sequence described in 40 CFR part 1065, subpart F, steady-state testing generally follows the transient test. For those cases where we do not require transient testing, perform the steady-state test after an appropriate warm-up period, consistent with good engineering judgment.

**§1039.510 Which duty cycles do I use for transient testing?**

- (a) Measure emissions by testing the engine on a dynamometer with one of the following transient duty cycles to determine whether it meets the transient emission standards in §1039.101(a):
  - (1) If you certify an engine family for constant-speed operation only, use the transient duty-cycle described in Appendix V of this part.
  - (2) For all other engines, use the transient duty-cycle described in Appendix VI of this part.
- (b) The transient test sequence consists of an initial run through the transient sequence from a cold start, 20 minutes with no engine operation, then a final run through the same transient sequence. Start sampling emissions immediately after you start the engine. Combine the results from these two test runs by applying a weighting factor of 10 percent to the cold-start measurement and 90 percent to the hot-start measurement.
- (c) Conduct repeat tests and cool the engine down between tests as described in 40 CFR 86.1335-90 and 86.1336-84(e).

**§1039.515 What are the test procedures related to not-to-exceed standards?**

Use the test procedures described in 40 CFR 86.1370-2007 to determine whether the engine meets the not-to-exceed emission standards in §1039.101(c).

**§1039.520 What testing must I perform to establish deterioration factors?**

Section 1039.245 describes the method for using test data or engineering analysis to establish deterioration factors for an engine family.

**§1039.525 How do I adjust emission levels to account for infrequently regenerating aftertreatment devices?**

This section describes how to adjust emission results from engines using aftertreatment technology with infrequent regeneration events. For this section, “regeneration” means an intended event during which emission levels change while the system restores aftertreatment performance. For example, exhaust gas temperatures may increase temporarily to remove sulfur from adsorbers or to oxidize accumulated particulate matter in a trap. For this section, “infrequent” refers to regeneration events that are expected to occur less than once over the applicable transient duty cycle.

- (a) Developing adjustment factors. Develop an upward adjustment factor and a downward adjustment factor for each pollutant based on measured emission data and observed regeneration frequency. Adjustment factors should generally apply to an entire engine family, but you may develop separate adjustment factors for different engine configurations within an engine family. You may use carryover or carry-across data to establish adjustment factors for an engine family, as described in §1039.235(d), consistent with good engineering judgment. All adjustment factors for regeneration are additive. You may use either of the following different approaches for engines that use

aftertreatment with infrequent regeneration events:

(1) You may disregard this section if regeneration does not significantly effect emission levels for an engine family (or configuration) or if it is not practical to identify when regeneration occurs. If you do not use adjustment factors under this section, your engines must meet emission standards for all testing, without regard to regeneration.

(2) If your engines use aftertreatment technology with extremely infrequent regeneration and you are unable to apply the provisions of this section, you may ask us to approve an alternate methodology to account for regeneration events.

(b) Calculating average adjustment factors. Calculate the average adjustment factor ( $EF_A$ ) based on the following equation:

$$EF_A = (F)(EF_H) + (1-F)(EF_L)$$

Where:

F = the frequency of the regeneration event in terms of the fraction of tests during which the regeneration occurs.

$EF_H$  = measured emissions from a test in which the regeneration occurs.

$EF_L$  = measured emissions from a test in which the regeneration does not occur.

(c) Applying adjustment factors. Apply adjustment factors based on whether regeneration occurs during the test run. You must be able to identify regeneration in a way that is readily apparent during all testing.

(1) If regeneration does not occur during a test run, add an upward adjustment factor to the measured emission rate. Determine the upward adjustment factor (UAF) using the following equation:

$$UAF = EF_A - EF_L$$

(2) If regeneration occurs during a test run, subtract a downward adjustment factor from the measured emission rate. Determine the downward adjustment factor (DAF) using the following equation:

$$DAF = EF_H - EF_A$$

(d) Sample calculation. If  $EF_L$  is 0.10 g/kW-hr,  $EF_H$  is 0.50 g/kW-hr, and F is 0.1 (the regeneration occurs once for each ten tests), then:

$$EF_A = (0.1)(0.5 \text{ g/kW-hr}) + (1.0 - 0.1)(0.1 \text{ g/kW-hr}) = 0.14 \text{ g/kW-hr}$$

$$UAF = 0.14 \text{ g/kW-hr} - 0.10 \text{ g/kW-hr} = 0.04 \text{ g/kW-hr}$$

$$DAF = 0.50 \text{ g/kW-hr} - 0.14 \text{ g/kW-hr} = 0.36 \text{ g/kW-hr}$$

## **Subpart G—Special Compliance Provisions**

### **§1039.601 What compliance provisions apply to these engines?**

Engine and equipment manufacturers, as well as owners, operators, and rebuilders of these engines, and all other persons, must observe the provisions of this part, the requirements and prohibitions in 40 CFR part 1068, and the requirements of the Act.

### **§1039.605 What provisions apply to engines already certified under the motor-vehicle program?**

- (a) If you are an engine manufacturer, this section allows you to certify nonroad engines to the requirements that apply under 40 CFR parts 85 and 86 instead of certifying them under the requirements of this part 1039. If you install engines in nonroad equipment, we will consider you an engine manufacturer if you modify the engine in any of the ways described in paragraph (c)(2) of this section; note that such engine modifications prevent you from using the provisions of this section. We consider engines you produce under this section to be exempt from the requirements of this part. See §1039.610 for similar provisions that apply to engines certified to chassis-based standards for motor vehicles.
- (b) The only requirements or prohibitions from this part that apply to an engine that is exempt under this section are in this section. The engine exempted under this section must meet all applicable requirements from 40 CFR parts 85 and 86. This applies to engine manufacturers, equipment manufacturers who use these engines, and all other persons as if these engines were used in a motor vehicle.
- (c) If you meet all the following criteria and requirements regarding your new nonroad engine, it is exempt from the standards in this part:
  - (1) Your engine must be covered by a valid certificate of conformity under 40 CFR part 86.
  - (2) You must not make any changes to the certified engine that we could reasonably expect to increase its exhaust emissions. For example, if you make any of the following changes to one of these engines, you do not qualify for this exemption:
    - (i) Change any fuel system parameters from the certified configuration.
    - (ii) Change any other emission-related components.
    - (iii) Modify or design the engine cooling system so that temperatures or heat rejection rates are outside the original engine manufacturer's specified ranges.
  - (3) You must demonstrate that fewer than 50 percent of the engine model's total sales, from all companies, are used in nonroad applications.
  - (4) The engine must have the label we require under 40 CFR part 86.
  - (5) You must add a permanent supplemental label to the engine in a position where it will remain clearly visible after installation in the equipment. In your engine's emission control information label, do the following:
    - (i) Include the heading: "Nonroad Engine Emission Control Information".
    - (ii) Include your full corporate name and trademark.
    - (iii) State: "THIS ENGINE WAS ADAPTED FOR NONROAD USE WITHOUT AFFECTING ITS EMISSION CONTROLS. THE EMISSION-CONTROL SYSTEM DEPENDS ON THE USE OF FUEL MEETING SPECIFICATIONS THAT APPLY FOR MOTOR-VEHICLE APPLICATIONS. OPERATING THE

ENGINE ON OTHER FUELS MAY BE A VIOLATION OF FEDERAL LAW.”.

- (iv) State the date you finished modifying the engine (month and year), if applicable.
- (6) The original and supplemental labels must be readily visible after the engine is installed in the equipment or, if the equipment obscures the engine’s emission control information label, the equipment manufacturer must attach duplicate labels, as described in 40 CFR 1068.105.
- (7) Send the Designated Officer a signed letter by the end of each calendar year (or less often if we tell you) with all the following information:
  - (i) Identify your full corporate name, address, and telephone number.
  - (ii) List the engine models you expect to produce under this exemption in the coming year.
  - (iii) State: "We produce each listed engine model for nonroad application without making any changes that could increase its certified emission levels, as described in 40 CFR 1039.605."
- (d) If your engines do not meet the criteria listed in paragraph (c) of this section, they will be subject to the standards and prohibitions of this part. Producing these engines without a valid exemption or certificate of conformity would violate the prohibitions in 40 CFR 1068.101.
- (e) If you are the original engine manufacturer of both the highway and nonroad versions of an exempted engine, you must send us emission test data on the applicable nonroad duty cycle(s). You may include the data in your application for certification or in your letter requesting the exemption.
- (f) If you are the original manufacturer of an exempted engine that is modified by another company under this exemption, we may require you to send us emission test data on the applicable nonroad duty cycle(s). If we ask for this data, we will allow a reasonable amount of time to collect it. You are responsible for emission-related compliance under 40 CFR parts 85 and 86 for these engines, unless another company becomes the engine manufacturer for these engines (see paragraph (a) of this section).
- (g) If you are not an engine manufacturer, you may produce nonroad equipment from motor-vehicle engines under this section as long as the engine has the label we specify in paragraph (c)(5) of this section and you do not modify the engine in any way that may affect its emission control. Add the fueling label we specify in §1039.135(f)(1)(i).

**§1039.610 What provisions apply to vehicles already certified under the motor-vehicle program?**

- (a) If you are an engine manufacturer, this section allows you to certify nonroad vehicles to the requirements that apply under 40 CFR parts 85 and 85 instead of certifying them under the requirements of this part 1039. We consider engines and vehicles you produce under this section to be exempt from the requirements of this part. See §1039.605 for similar provisions that apply to motor-vehicle engines certified to engine-based standards.
- (b) The only requirements or prohibitions from this part that apply to an engine that is exempt under this section are in this section. The vehicle and the engine exempted under this section must meet all applicable requirements from 40 CFR parts 85 and 86. This applies to engine manufacturers, equipment manufacturers who use these engines, and all other persons as if these engines were used in a motor vehicle.

- (c) If you meet all the following criteria and requirements regarding your new nonroad vehicle, it is exempt from the standards in this part:
- (1) Your vehicle must be covered by a valid certificate of conformity under 40 CFR part 86.
  - (2) You must not make any changes to the certified engine or vehicle that we could reasonably expect to increase its exhaust emissions. For example, if you make any of the following changes, you do not qualify for this exemption:
    - (i) Change any fuel system parameters from the certified configuration.
    - (ii) Change any other emission-related components.
    - (iii) Modify or design the engine cooling system so that temperatures or heat rejection rates are outside the original engine manufacturer's specified ranges.
  - (3) You must demonstrate that fewer than 50 percent of the engine model's total sales, from all companies, are used in nonroad applications.
  - (4) The vehicle must have the label we require under 40 CFR part 86.
  - (5) You must add a permanent supplemental label to the engine in a position where it will remain clearly visible after installation in the equipment. In your engine's emission control information label, do the following:
    - (i) Include the heading: "Nonroad Engine Emission Control Information".
    - (ii) Include your full corporate name and trademark.
    - (iii) State: "THIS ENGINE WAS ADAPTED FOR NONROAD USE WITHOUT AFFECTING ITS EMISSION CONTROLS. THE EMISSION-CONTROL SYSTEM DEPENDS ON THE USE OF FUEL MEETING SPECIFICATIONS THAT APPLY FOR MOTOR-VEHICLE APPLICATIONS. OPERATING THE ENGINE ON OTHER FUELS MAY BE A VIOLATION OF FEDERAL LAW.".
    - (iv) State the date you finished modifying the engine (month and year), if applicable.
  - (6) The original and supplemental labels must be readily visible after the engine is installed in the equipment or, if the equipment obscures the engine's emission control information label, the equipment manufacturer must attach duplicate labels, as described in 40 CFR 1068.105.
  - (7) Send the Designated Officer a signed letter by the end of each calendar year (or less often if we tell you) with all the following information:
    - (i) Identify your full corporate name, address, and telephone number.
    - (ii) List the vehicle models you expect to produce under this exemption in the coming year.
    - (iii) State: "We produce each listed engine or vehicle model for nonroad application without making any changes that could increase its certified emission levels, as described in 40 CFR 1039.610."
- (d) If your engines do not meet the criteria listed in paragraph (c) of this section, they will be subject to the standards and prohibitions of this part. Producing these engines without a valid exemption or certificate of conformity would violate the prohibitions in 40 CFR 1068.101.
- (e) If you are the original engine manufacturer of both the highway and nonroad versions of an exempted engine, you must send us emission test data on the applicable nonroad duty cycle(s). You may include the data in your application for certification or in your letter requesting the exemption.

- (f) If you are the original manufacturer of an exempted engine that is modified by another company under this exemption, we may require you to send us emission test data on the applicable nonroad duty cycle(s). If we ask for this data, we will allow a reasonable amount of time to collect it. You are responsible for emission-related compliance under 40 CFR parts 85 and 86 for these engines, unless another company becomes the engine manufacturer for these engines (see paragraph (a) of this section).
- (g) If you are not an engine manufacturer, you may produce nonroad equipment from motor vehicles under this section as long as the engine has the label we specify in paragraph (c)(5) of this section and you do not modify the engine in any way that may affect its emission control.

### **§1039.615 What special provisions apply to engines using noncommercial fuels?**

In §1039.115(e), we generally require that engines meet emission standards for any adjustment within the full range of any adjustable parameters. For engines that use noncommercial fuels significantly different than the specified test fuel of the same type, you may ask us to use the parameter-adjustment provisions of this section instead of those in §1039.115(e). Engines certified under this section must be in a separate engine family.

- (a) If we approve your request, you may do the following:
  - (1) Certify the engine using the specified test fuel.
  - (2) Produce the engine without limits or stops to keep the engine adjusted within the certified range.
  - (3) Specify in-use adjustments different than the adjustable settings appropriate for the certified test fuel, consistent with the provisions of paragraph (b)(1) of this section.
- (b) To produce engines under this section, you must do the following:
  - (1) Specify in-use adjustments needed so the engine's level of emission control is equivalent to that from the certified configuration.
  - (2) Add the following information to the emission control information label specified in §1039.135:
    - (i) Include instructions describing how to adjust the engine to operate in a way that maintains the effectiveness of the emission-control system.
    - (ii) State: "THIS ENGINE IS CERTIFIED TO OPERATE IN APPLICATIONS USING NONCOMMERCIAL FUEL. MALADJUSTMENT OF THE ENGINE IS A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY."
  - (3) Keep records to document the destinations and quantities of engines produced under this section.

### **§1039.620 What are the provisions for exempting engines used solely for competition?**

- (a) As an equipment manufacturer, you may use an uncertified engine if your vehicle or equipment will be used solely for competition.
- (b) The definition of nonroad engine in 40 CFR 1068.30 excludes engines used solely for competition. These engines are not required to comply with this part, but 40 CFR 1068.101 restricts the use of competition engines for non-competition purposes and this section requires that you label these engines.
- (c) As an engine manufacturer, your engine is exempt without a request if you have a written request for an exempted engine from the equipment manufacturer, showing the basis for believing that the equipment will be used solely for competition.

- (d) We consider a vehicle or piece of equipment to be one that will be used solely for competition if it has features that are not easily removed that would make its use other than in competition unsafe, impractical, or highly unlikely.
- (e) We may discontinue your exemption if we find that engines exempted under this section are not used solely for competition.
- (f) You must permanently label engines exempted under this section to clearly indicate that they are to be used solely for competition. Failure to properly label an engine will void its exemption.

**§1039.625 What requirements apply under the program for equipment-manufacturer flexibility?**

The provisions of this section allow equipment manufacturers to produce equipment with engines certified to previous tiers of emission standards after the Tier 4 emission standards begin to apply. To be eligible to use these provisions, you must follow all the instructions in this section. See 40 CFR 89.102(d) and (e) for provisions that apply to equipment made while Tier 1, Tier 2, or Tier 3 standards apply. See §1039.626 for requirements that apply specifically to equipment manufacturers using the flexibility provisions of this section for equipment produced outside the United States.

- (a) General. We may allow you to introduce into commerce in the United States limited numbers of nonroad equipment with exempted engines under this section. These provisions are available up to seven years after Tier 4 emission standards begin for each engine-power category, as shown in Table 1 of this section. Consider all U.S.-directed equipment sales, including those from any parent or subsidiary companies, in showing that you meet the requirements of this section. You may use the exemptions in this section only if you have the primary responsibility for designing and manufacturing the equipment and install the engine in the equipment.

Table 1 of §1039.625	
Engine Power	Model Year
kW < 19	2008
19 # kW < 56	2013
56 # kW < 130	2012
130 # kW ≤ 560	2011
kW > 560	2011

- (b) Allowances. The following provisions, which apply separately to each engine-power category used to define emission standards in §1039.101, describe how many exempted engines you may produce under this section:
  - (1) Percent-of-production allowances. You may produce a certain number of units with exempted engines based on a percentage of your total sales within an engine-power

- category. The sum of these percentages within an engine-power category during the seven-year period specified in paragraph (a) of this section may not exceed 80 percent of your U.S.-directed production, except as allowed under paragraph (b)(2) of this section.
- (2) Small-volume allowances. You may produce up to 700 units with exempted engines within an engine-power category during the seven-year period, with no more than 200 units in any single calendar year within an engine-power category. This paragraph (b)(2) applies only to engines from a single engine family within each calendar year.
- (c) Percentage calculation. Calculate annually the percentage of equipment with exempted engines from your total U.S.-directed production within an engine-power category if you need to show that you meet the percent-of-production allowances in paragraph (b)(1) of this section.
- (d) Inclusion of engines not subject to Tier 4 standards. The following provisions apply to engines that are not subject to Tier 4 standards:
- (1) If you use the provisions of §1068.105(a) to use up your inventories of engines not certified to new emission standards, do not include these units in your count of equipment with exempted engines under paragraph (b) of this section.
  - (2) If you install engines that are exempted from the Tier 4 standards for any reason, other than for equipment-manufacturer flexibility under this section, do not include these units in your count of exempted engines under paragraph (b) of this section. For example, if we grant a hardship exemption for the engine manufacturer, you do not need to count those as exempted engines under this section. This paragraph (d)(2) applies only if the engine has a permanent label describing why it is exempted from the Tier 4 standards.
  - (3) If the engine's model year or manufacturing date for its engine-power category precedes the applicability of the Tier 4 standards, you may nevertheless start using the allowances under this section before the applicability of the Tier 4 standards apply; however, you may not start using these early allowances before the seven-year period for using allowances under the Tier 2 or Tier 3 program expires (see 40 CFR 89.102(d)). To use these early allowances, you must use engines that meet the emission standards described in paragraph (e) of this section. You must also count these units or calculate these percentages as described in paragraph (c) of this section and apply them to the total number or percentage of equipment with exempted engines we allow for the Tier 4 standards as described in paragraph (b) of this section. The maximum number of cumulative early allowances is 10 percent under the percent-of-production allowance or 100 units under the small-volume allowance.
  - (4) Do not include equipment using model year 2008 or 2009 engines certified under the provisions of §1039.101(j) in your count of equipment using exempted engines.
- (e) Standards. If you produce equipment with exempted engines under this section, the engines must meet less stringent emission standards.
- (1) If you are using the provisions of paragraph (d)(3) of this section, engines must meet the appropriate Tier 1 (or more stringent) emission standards described in §89.112.
  - (2) In all other cases, engines with maximum power from 37 kW up to 560 kW must meet the appropriate Tier 3 standards described in §89.112. Engines with maximum power below 37 kW or at least 560 kW must meet the appropriate Tier 2 standards described in §89.112.
- (f) Equipment labeling. You must add a permanent, legible label, written in block letters in

English to the engine or another readily visible part of each piece of equipment you produce with exempted engines under this section. This label, which supplements the engine manufacturer's emission control information label, must include at least the following items:

- (1) The label heading "EMISSION CONTROL INFORMATION".
- (2) Your corporate name and trademark.
- (3) The calendar year in which the equipment is manufactured.
- (4) Whom to contact for further information.
- (5) The following statement:

THIS EQUIPMENT [or identify the type of equipment] HAS AN ENGINE THAT HAS BEEN EXEMPTED FROM CURRENT FEDERAL NONROAD EMISSION STANDARDS, AS ALLOWED BY 40 CFR 1039.625.

(g) Notification and reporting. You must notify us of your intent to use the provisions of this section and send us an annual report to verify that you are not exceeding the allowances.

(1) Before January 1 of the first year you intend to use the flexibility provisions of this section, send the Designated Compliance Officer and the Designated Enforcement Officer a written notice of your intent, including:

- (i) Your company's name and address.
- (ii) Whom to contact for more information.
- (iii) The calendar years you expect to use the exemption provisions of this section.
- (iv) The name and address of the company that produces the engines you will be using for the equipment exempted under this section.
- (v) Your best estimate of the number of units in each engine-power category you will produce under this section in the upcoming calendar year and whether you intend to comply under paragraph (b)(1) or (b)(2) of this section.
- (vi) The number of units in each engine-power category you have sold in previous calendar years under 40 CFR 89.102(d).

(2) For each year that you use the flexibility provisions of this section, send the Designated Compliance Officer and the Designated Enforcement Officer a written report by March 31 of the following year. Include in your report the total number of engines you sold in the preceding year for each engine-power category, based on actual U.S.-directed production information. Also identify the percentages of U.S.-directed production that correspond to the number of units in each engine-power category and the cumulative numbers and percentages of units for all the units you have sold under this section for each engine-power category. You may omit the percentage figures if you include in the report a statement that you will not be using the percent-of-production allowances in paragraph (b)(1) of this section.

(h) Recordkeeping. Keep the following records of all equipment with exempted engines you produce under this section for at least five full years after the final year in which allowances are available for each engine-power category:

- (1) The model number, serial number, and the date of manufacture for each engine and piece of equipment.
- (2) The maximum power of each engine.
- (3) The total number or percentage of equipment with exempted engines, as described in

paragraph (b) of this section and all documentation supporting your calculation..

(4) The notifications and reports we require under paragraph (g) of this section.

- (i) Enforcement. Producing more exempted engines or equipment than we allow under this section, or installing engines that do not meet the certification requirements of paragraph (e) of this section, is a violation of 40 CFR 1068.101(a)(1). You must give us the records we require under this section if we ask for them (see 40 CFR 1068.101(a)(2)).
- (j) Provisions for engine manufacturers. As an engine manufacturer, you may produce exempted engines as needed under this section. You do not have to request this exemption for your engines, but you must have written assurance from equipment manufacturers that they need a certain number of exempted engines under this section. Send us an annual report of the engines you produce under this section, as described in §1039.250(a). The exempted engines must meet less stringent standards, as described in paragraph (e) of this section. It must also have the label we require in §1039.135, with the following additional statement:  
“THIS ENGINE HAS BEEN EXEMPTED FROM CURRENT FEDERAL NONROAD EMISSION STANDARDS. SELLING OR INSTALLING THIS ENGINE FOR ANY PURPOSE OTHER THAN FOR THE EQUIPMENT FLEXIBILITY PROVISIONS OF 40 CFR 1039.625 MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.
- (k) Other exemptions. See 40 CFR 1068.255 for exemptions based on hardship for equipment manufacturers and secondary engine manufacturers.

### **§1039.626 What special provisions apply to engines imported under the equipment-manufacturer flexibility program?**

This section identifies requirements that apply specifically to equipment manufacturers using the flexibility provisions of §1039.625 for equipment produced outside the United States. For purposes of this section, only a nonroad equipment manufacturer with primary responsibility for designing and manufacturing a piece of equipment that also installs the engine in the equipment is eligible to use the allowances under §1039.625. Companies that import equipment into the U.S., but do not have the primary responsibility for designing and manufacturing a piece of equipment or do not install the engine in the equipment are not eligible for these allowances. They may import exempt equipment if it is covered by an allowance or transition provision associated with an equipment manufacturer meeting the requirements of §1039.625 and this section. As an equipment manufacturer, you may use the allowances specified in §1039.625 if you comply with the provision in §1039.625 and commit to the following:

- (a) Any United States Environmental Protection Agency inspector or auditor will be given full, complete and immediate access to conduct inspections and audits of the foreign nonroad equipment manufacturer.
  - (1) Inspections and audits may be either announced in advance by EPA, or unannounced.
  - (2) Access will be provided to any location where
    - (i) nonroad equipment or vehicle is produced;
    - (ii) Documents related to manufacturer operations are kept; and
    - (iii) Equipment or Vehicles are tested or stored.
  - (3) Inspections and audits may be by EPA employees or EPA contractors.

- (4) Any documents requested that are related to matters covered by inspections and audits will be provided to an EPA inspector or auditor on request.
  - (5) Inspections and audits by EPA may include review and copying of any documents related to demonstrating compliance with the exceptions in § 1039.625.
  - (6) Inspections and audits by EPA may include taking samples of equipment or vehicles, and interviewing employees.
  - (7) Any employee of a foreign nonroad equipment manufacturer will be made available for interview by the EPA inspector or auditor, on request, within a reasonable time period.
  - (8) English language translations of any documents will be provided to an EPA inspector or auditor, on request, within 10 working days.
  - (9) English language interpreters will be provided to accompany EPA inspectors and auditors, on request.
- (b) An agent for service of process located in the District of Columbia will be named, and service on this agent constitutes service on the foreign nonroad equipment manufacturer or any officer, or employee of the foreign nonroad equipment manufacturer for any action by EPA or otherwise by the United States related to the requirements of 40 CFR part 1039.
  - (c) The forum for any civil or criminal enforcement action related to the provisions of this section for violations of the Clean Air Act or regulations promulgated thereunder shall be governed by the Clean Air Act, including the EPA administrative forum where allowed under the Clean Air Act.
  - (d) United States substantive and procedural laws shall apply to any civil or criminal enforcement action against the foreign nonroad equipment manufacturer or any employee of the foreign nonroad equipment manufacturer related to the provisions of this section.
  - (e) Submitting a notification of intention to use any of the exceptions in § 1039.625 above, producing and exporting equipment or vehicles to the United States for resale, and all other actions to comply with the requirements of 40 CFR part 1039 constitute actions or activities covered by and within the meaning of 28 U.S.C. 1605(a)(2), but solely with respect to actions instituted against the foreign nonroad equipment manufacturer, its agents, officers, and employees in any court or other tribunal in the United States for conduct that violates the requirements of part 1039, including such conduct that violates Title 18 U.S.C. section 1001, Clean Air Act section 113(c)(2), or other applicable provisions of the Clean Air Act.
  - (f) The foreign nonroad equipment manufacturer, or its agents, officers, or employees, will not seek to detain or to impose civil or criminal remedies against EPA inspectors or auditors, whether EPA employees or EPA contractors, for actions performed within the scope of EPA employment related to the provisions of this section.
  - (g) The commitment required by this section shall be signed by the owner or president of the foreign nonroad equipment manufacturer business.
  - (h) Sovereign immunity. By submitting a notification of its intent to use the flexibility provision under § 1039.625, or by producing and exporting for resale to the United States nonroad equipment under this section, the foreign nonroad equipment manufacturer, its agents, officers, and employees, without exception, become subject to the full operation of the administrative and judicial enforcement powers and provisions of the United States

without limitation based on sovereign immunity, with respect to actions instituted against the foreign nonroad equipment manufacturer, its agents, officers, and employees in any court or other tribunal in the United States for conduct that violates the requirements applicable to the foreign nonroad equipment manufacturer under 40 CFR part 1039, including such conduct that violates Title 18 U.S.C. section 1001, Clean Air Act section 113(c)(2), or other applicable provisions of the Clean Air Act.

- (i) English language reports. Any report or other document submitted to EPA by any foreign nonroad equipment manufacturer shall be in the English language, or shall include an English language translation.

**§1039.630 What are the hardship provisions for equipment manufacturers?**

If you qualify for the hardship provisions specified in 40 CFR 1068.255, we may approve your hardship application subject to three additional conditions:

- (a) You must show that you were selling new equipment with engines that were certified to meet the requirements of 40 CFR part 89 before 2003.
- (b) You must show that you have used up the allowances to produce equipment with exempted engines under §1039.625.
- (c) You may produce engines under this section for up to one year total (or two years for small-volume manufacturers).

**§1039.635 What are the hardship provisions for engine manufacturers?**

If you qualify for the hardship provisions specified in 40 CFR 1068.245, we may approve a period of delayed compliance for up to two years total for small-volume manufacturers or one year total for all other companies. If you qualify for the hardship provisions specified in 40 CFR 1068.250 for small-volume manufacturers, we may approve a period of delayed compliance for up to two years total.

**§1039.639 What special provisions apply to engines sold in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?**

Engines introduced into commerce in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are subject to the latest emission standards in 40 CFR 89.112 instead of the Tier 4 standards in §1039.101, but only if the engines include the following statement on the label we require in 40 CFR 89.110 (or on a separate, permanent label with your corporate name and trademark): “THIS ENGINE DOES NOT CONFORM TO U.S. EPA EMISSION REQUIREMENTS IN EFFECT AT THE TIME OF PRODUCTION AND MAY NOT BE IMPORTED INTO THE UNITED STATES OR ANY TERRITORY OF THE UNITED STATES EXCEPT GUAM, AMERICAN SAMOA, OR THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS.”. Introducing any such engine into commerce in any state or territory of the United States other than Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands, throughout its lifetime, is a violation of 40 CFR 1068.101(a)(1).

**§1039.645 What special provisions apply to engines used for transportation refrigeration units?**

The provisions of this section apply for engines used in transportation refrigeration units (TRUs). All other provisions of this part apply for these engines, except as specified in this

section.

- (a) Engines used only in TRU applications may be certified using the following special provisions:
  - (1) The engines are not required to meet the transient emission standards of subpart B of this part.
  - (2) The steady-state emission standards of subpart B apply for emissions measured over the steady-state test cycle described in paragraph (b) of this section instead of the otherwise applicable test cycle described in Appendix I, III, or IV of this part.
- (b) The steady-state test cycle for TRU engines is:

Steady-state Cycle for TRU Engines				
Mode Number	Engine Speed	Observed Torque <sup>1</sup>	Minimum Ti me in mo de (mi nut es)	Weighting F a c t o r s
1	Maximum test speed	75	3.0	0.25
2	Maximum test speed	50	3.0	0.25
3	Intermediate test speed	75	3.0	0.25
4	Intermediate test speed	50	3.0	0.25

<sup>1</sup>The percent torque is relative to the maximum torque at the given engine speed.

- (c) Engines certified under this section must be certified in a separate engine family that contains only TRU engines.
- (d) You must do the following for each engine certified under this section:
  - (1) State on the emission control information label for each engine that is certified under the provisions of this section: "THIS ENGINE IS CERTIFIED TO OPERATE ONLY IN TRANSPORTATION REFRIGERATION UNITS. USE OF THIS THE ENGINE IN OTHER APPLICATIONS IS A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY."
  - (2) State in the installation instructions required by §1039.130 all instructions necessary to ensure that the engine will operate only in the modes covered by the test cycle described in this section.
  - (3) Keep records to document the destinations and quantities of engines produced under this section.
- (e) An engine is not a TRU engine that can be certified under this section if any of the following are true:
  - (1) The engine is installed in any equipment other than refrigeration units for railcars, truck trailers or other freight vehicles.

- (2) The engine operates in any mode not covered by the test cycle described in this section, except for negligible transitional operation between two allowable modes. As an example, a thirty-second transition period would clearly not be considered negligible.
  - (3) The engine is sold in a configuration that allows the engine to operate in any mode not covered by the test cycle described in this section. As an example, this would include an engine sold without a governor that limited operation to only those modes covered by the test cycle described in this section.
  - (4) The engine is subject to Tier 3 or earlier standards, or phase-out Tier 4 standards.
- (f) All engines certified under this section must comply with the NTE requirements of subpart B of this part. This requirement applies without regard to whether the engine would otherwise have been subject to NTE standards if it had not been certified under this section.

## Subpart H—Averaging, Banking, and Trading for Certification

### §1039.701 General provisions.

- (a) You may average, bank, and trade (ABT) emission credits for purposes of certification as described in this subpart to show compliance with the standards of this part. Participation in this program is voluntary.
- (b) The averaging set restrictions that apply are specified in §1039.735.
- (c) The definitions of Subpart I of this part apply to this subpart. The following definitions also apply:
- (1) Actual credits means credits you have generated that we have verified in reviewing the final report.
  - (2) Broker means any entity that facilitates a trade between a buyer and seller.
  - (3) Buyer means the entity that receives credits as a result of trade.
  - (4) Reserved credits means credits you have generated that we have not yet verified in reviewing the final report.
  - (5) Seller means the entity that provides credits during a trade.
  - (6) Standard means the standard that applies under subpart B of this part for engines not participating in the ABT program of this subpart.
- (d) Credits generated under this subpart cannot be used to offset any exceedances above FEL. This applies for all testing, including certification, SEA, and in-use testing. Note: You may use credits to allow you to recertify the engine family to a higher FEL that would be applicable to future production.
- (e) Credits can be used in the year they are generated or in future years. Credits may not be used for past model years.
- (f) Engine families that use credits for one or more pollutants, may not generate positive credits for another pollutant.

### §1039.705 How do I generate and calculate emission credits?

The provisions of this section apply separately for calculating NO<sub>x</sub> credits, NMHC+NO<sub>x</sub> credits, or PM credits.

- (a) Calculate positive credits for an engine family that has an FEL below the applicable standard. Calculate negative credits for an engine family that has an FEL above the applicable standard.
- (b) For each participating engine family, calculate NO<sub>x</sub> emission credits, NMHC+NO<sub>x</sub> emission credits and/or PM emission credits (positive or negative) according to the following equation. Round them to the nearest one-hundredth of a megagram (Mg), using consistent units throughout the equation:

$$\text{Emission credits} = (\text{Std} - \text{FEL}) \times (\text{Volume}) \times (\text{AvgPR}) \times (\text{UL}) \times (10^{-6})$$

Where:

Std = the standard, in grams per kilowatt-hour, that applies under subpart B of this part for engines not participating in the ABT program of this subpart.

FEL = the family emission limit for the engine family in grams per kilowatt-hour.

Volume = the number of nonroad engines eligible to participate in the averaging,

banking, and trading program within the given engine family during the model year, as described in paragraph (c) of this section.

AvgPR = the average maximum engine power of all of the configurations within an engine family, calculated on a sales-weighted basis, in kilowatts.

UL = the useful life for the given engine family, in hours.

- (c) Use quarterly projections of production volumes for initial certification. Compliance at the end of the model year is determined based on the actual applicable production/sales volumes. Do not include any of the following engines in your applicable production/sales volumes:
- (1) Engines exempted under subpart G of this part or under part 1068.
  - (2) Exported engines.
  - (3) Engines not subject to the requirements of this part, including engines excluded under §1039.5.
  - (4) Engines certified using special test procedures under 40 CFR 1065.10. (Note: this restriction does not apply for engines certified using alternate test procedures under 40 CFR 1065.10.)
  - (5) Any other engines, where we indicate elsewhere in this part 1039 that they are not to be included in the calculations of this subpart.

#### **§1039.710 How do I average?**

- (a) Averaging is the exchange of emissions credits among engine families.
- (b) You may certify one or more engine families to an FEL above or below the applicable standard if you show, at the time of certification, that the summation of your projected balance of all emissions credit transactions in that model year is greater than or equal to zero.
- (c) If you certify an engine family to an FEL that exceeds the applicable standard, you must obtain sufficient emissions credits to offset the credit shortfall produced by the engine family. Emissions credits used in averaging to address this shortfall may come from emissions credits generated from your other engine families in the same model year, from banked emissions credits, or from emissions credits obtained through trading.

#### **§1039.715 How do I bank emission credits?**

- (a) Banking is the retention of emissions credits by the manufacturer generating the emissions credits, for use in averaging or trading in future model years.
- (b) In your application for certification, designate any emissions credits that you intend to bank. These credits will be considered reserved credits. During the model year, and before submittal of the end-of-year report, credits originally designated for banking may be redesignated for trading or averaging for the end-of-year report or final report.
- (c) Credits designated for banking from the previous model year that have not been reviewed by EPA may be used in averaging or trading transactions. However, such credits may be revoked at a later time following EPA review of the end-of-year or final report or any subsequent audit actions.
- (d) Banked credits are considered actual credits only after the end of the model year and after EPA has reviewed the end-of-year and final reports.

### **§ 1039.720 How do I trade emissions credits?**

- (a) Trading is the exchange of emissions credits between manufacturers. Trading of emissions credits may only occur within the same averaging set.
- (b) You may trade actual or reserved credits. Credits banked in a previous model year or credits generated during the model year of the trading transaction may be used for trading. Traded reserved credits, such as those generated during the model year of the trading transaction, remain reserved until we verify them after the end of the model year. Traded credits may be used for averaging, banking, or further trading transactions.
- (c) If a negative credit balance results from a transaction, both the buyer and seller are liable, except in cases deemed involving fraud. Certificates of all engine families participating in a negative trade may be voided under §1039.740.

### **§1039.725 What records must I keep?**

- (a) Establish, maintain and keep the following properly organized and indexed records for each engine family certified using the ABT program in this subpart:
  - (1) Model year and EPA engine family.
  - (2) FELs.
  - (3) Useful life.
  - (4) Maximum engine power for each configuration tested
  - (5) Projected applicable production/sales volume for the model year.
  - (6) Actual applicable production/sales volume for the model year.
- (b) Establish, maintain and keep the following properly organized and indexed records for each engine in the ABT program:
  - (1) Model year and EPA engine family.
  - (2) Engine identification number.
  - (3) Maximum engine power.
  - (4) Build date and assembly plant.
  - (5) Purchaser and destination.
- (c) Manufacturers involved in trading reserved credits must maintain the records specified in this paragraph (c) for each engine family in the trading program We may ask you to provide this information on a quarterly basis. This requirement applies with respect the following information:
  - (1) The engine family.
  - (2) The actual quarterly and cumulative applicable production/sales volume.
  - (3) All values required to calculate credits.
  - (4) The resulting type and number of credits generated/required.
  - (5) How and where credit surpluses are dispersed.
  - (6) How and through what means credit deficits are met.
- (d) Keep the records required by this section for eight years from the due date for the end-of-year report. You may use any appropriate storage formats or media, including paper, microfilm, or computer diskettes .
- (e) Nothing in this section limits our discretion in requiring the manufacturer to retain additional records or submit information not specifically required by this section.
- (f) Upon request, you must submit to us the information specified in this section.

**§1039.730 What must I include in my application for certification?**

- (a) You must declare in your application your intent to use the provisions of this subpart for each engine family that will be certified using the ABT program. You must also declare for which pollutants you are using ABT, and declare the FELs for your engine family for those pollutants. Your FELs must comply with the specifications of subpart B of this part, including the FEL caps. FELs must be expressed to the same number of decimal places as the applicable standards.
- (b) Include the following in your application for certification:
  - (1) A statement that, to the best of your belief, you will not have a negative credit balance for any engine family when all credits are calculated.
  - (2) Detailed calculations of projected emission credits (positive or negative) based on quarterly projections of applicable production/sales volume. If your engine family will generate positive emission credits, state specifically where the credits will be applied (e.g., to which engine family they will be applied in averaging, trading, or if they will be reserved for banking). If you have negative emission credits for your engine family, state the source of positive credits needed to offset the negative credits. Describe the source of credits by indicating from which engine family (and manufacturer, as applicable), and by specifying whether the credits are actual or reserved and whether they come from banking, trading, or from averaging with your other engine families within the model year.

**§1039.732 What reports must I submit after the end of the model year?**

This section specifies the requirements for submitting the end-of-year report and the final report.

This section specifies in paragraph (g) an additional report that must be submitted if you are involved in a trade of credits.

- (a)
  - (1) If any of your engine families are certified using the ABT provisions of this subpart, you must submit the end-of-year report within 90 days of the end of the model year. The end-of-year report must include the information specified in this section. We may waive the requirement to submit the end-of-year report, provided you submit the final report specified in paragraph (a)(2) of this section.
  - (2) If any of your engine families are certified using the ABT provisions of this subpart, you must submit the final report within 270 days of the end of the model year. The final report must include the information specified in this section.
- (b) Failure to submit reports on time is a violation of the Act with respect to each engine.
- (c) Your end-of-year and final reports must identify the engine families for which they apply and must include:
  - (i) Detailed calculation of emission credits (positive or negative) based on actual applicable production/sales volumes. Base your applicable production/sales volumes on the location of first retail sale. This location is also called the final product purchase location. A dealership is a typical location for the first retail sale.
  - (ii) Demonstrate that you have the positive credits needed to offset any negative credits.
  - (iii) State whether you will reserve any credits for banking.
- (d) Send end-of-year reports to the Designated Compliance Officer.
- (e) If you generate credits for banking and you do not send your end-of-year reports within 90 days after the end of the model year, you may not use the credits until we receive and review your reports. You may not use projected credits pending our review.

- (f) Errors discovered in your end-of-year report or final report, including errors in calculating credits, are corrected as follows:
- (1) Any errors discovered in the end-of-year report may be corrected in the final report up to 270 days from the end of the model year.
  - (2) Errors discovered by the manufacturer in the final report may be corrected up to 270 days from the end of the model year, and credits will be recalculated.
  - (3) If we or you determine within 270 days of the end of the model year, that an error occurred that mistakenly decreased your positive credits, the error will be corrected and credits will be recalculated. Such errors will not be corrected if they are determined more than 270 days from the end of the model year.
  - (4) In cases where credit balance is negative, if we determine that an error occurred that mistakenly decreased your balance of credits, we may, but are not required to, correct the error and recalculate the credits. This applies whether or not the error was discovered by you.
  - (5) If we determine at any time, that an error occurred that mistakenly increased your balance of credits, we will correct the error and recalculate the credits to decrease your balance. This applies whether or not the error was discovered by you.
- (g) If you trade credits, you must send the Designated Compliance Officer a report of the trade, within 90 days of any credit trade, that includes the following information:
- (1) The corporate names of the buyer, seller, and any brokers.
  - (2) Copies of contracts related to credit trading from the buyer, seller, and broker, as applicable.
  - (3) The engine families involved in the trade.
  - (4) The actual quarterly and cumulative applicable production/sales volume.
  - (5) The values required to calculate credits as given in §1039.705.
  - (6) The resulting type and number of credits generated.
  - (7) How and where credit surpluses are dispersed; and
  - (8) How and through what means credit deficits are met.
- (h) Include in each report a statement certifying the accuracy and authenticity of its contents.

**§1039.735 What restrictions apply for using credits?**

The following restrictions apply for credit use:

- (a) Averaging sets. Credits may be exchanged only within an averaging set. For Tier 4 engines, there is a single averaging set that includes all power categories. See paragraph (b) for provisions related to credits generated relative to earlier tiers of standards.
- (b) Credits from a different tier of standards. (1) For purposes of ABT under this subpart, you may not use credits generated from engines subject to emission standards under 40 CFR part 89, except as specified in the following table:

If the power rating of the credit-generating engine is . . .	Then you may use the following credits for Tier 4 compliance. . .
(i) Less than 37 kW	Credits from engines subject to emission standards in 89.112(a) Table 1, identified as Tier 2.

If the power rating of the credit- generating engine is. . .	Then you may use the following credits for Tier 4 compliance. . .
(ii) At least 37 kW, but less than 560 kW	Credits from engines subject to emission standards in 89.112(a) Table 1, identified as Tier 3.
(iii) 560 kW or higher	Credits from engines subject to emission standards in 89.112(a) Table 1, identified as Tier 2.

- (2) Credits generated from marine engines under the provisions of 40 CFR part 89 may not used under this part.
- (3) Credits generated from nonmarine engines under the provisions of 40 CFR part 89 allowed to be used under this part are subject to the averaging set restrictions described in 40 CFR 89.204. This means that credits generated by engines at or above 19 kW may not be used by engines less than 19 kW, and credits generated by engines less than 19 kW may not be used by engines at or above 19 kW.
- (4) See 40 CFR part 89 for other restrictions that may apply for use of credits generated under that part.
- (c) NO<sub>x</sub> and NMHC+NO<sub>x</sub> credits. You may use NO<sub>x</sub> credits to show compliance with NMHC+NO<sub>x</sub> standards. You may use NMHC+NO<sub>x</sub> credits to show compliance with NO<sub>x</sub> standards, but you must adjust the NMHC+NO<sub>x</sub> credits downward by twenty percent when you use them, as shown in the following equation:  

$$\text{NO}_x \text{ credits} = (0.8) \times (\text{NMHC+NO}_x \text{ credits}).$$
- (d) Other restrictions. Other sections of this part may include ABT restrictions for engines certified under certain special provisions. Those restrictions apply as specified.

**§1039.740 What can happen if I do not comply with the provisions of this subpart?**

- (a)(1) All certificates issued for engine family participating in this ABT program are conditional upon your full compliance with the provisions of this subpart during the model year of production and afterwards.
  - (2) Failure to comply with any provisions of this subpart will be deemed to be a failure to satisfy the conditions upon which the certificate was issued, and the certificate may be voided.
  - (3) By choosing to participate in this ABT program, you are responsible to establish to EPA’s satisfaction that the conditions under which the certificate was issued were satisfied or waived.
- (b) You may certify your engine family to an FEL above a applicable standard based on a projection that you will have sufficient credits to offset the credit deficit for the engine family. However, if you cannot show in your final report that you have sufficient actual credits to offset a credit deficit for any engine family, we may void the certificate of conformity for the engine family.
- (c) We may void the certificate of conformity for an engine family for which you fail to retain the records required in this subpart or to provide such information to us upon request.

## Subpart I—Definitions and Other Reference Information

### §1039.801 What definitions apply to this part?

The following definitions apply to this part. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

Act means the Clean Air Act, as amended, 42 U.S.C. 7401 et seq.

Adjustable parameter means any device, system, or element of design that someone can adjust (including those which are difficult to access) and that, if adjusted, may affect emissions or engine performance during emission testing or normal in-use operation. This includes, but is not limited to parameters related to injection timing and fueling rate. You may ask us to exclude a parameter that is difficult to access if it cannot be adjusted to affect emissions without significantly degrading performance, or if you otherwise show us that it will not be adjusted in a way that affects emissions during in-use operation.

Aftertreatment means relating to any system, component, or technology mounted downstream of the exhaust valve or exhaust port whose design function is to reduce exhaust emissions.

Aircraft has the meaning given in 40 CFR 87.1.

Auxiliary emission control device means any element of design that senses temperature, motive speed, engine RPM, transmission gear, or any other parameter for the purpose of activating, modulating, delaying, or deactivating the operation of any part of the emission control system.

Blue Sky Series engine means an engine meeting the requirements of §1039.140.

Brake power means the usable power output of the engine, not including power required to operate fuel pumps, oil pumps, or coolant pumps.

Broker means any entity that facilitates a trade of emission credits between a buyer and seller.

Calibration means the set of specifications and tolerances specific to a particular design, version, or application of a component or assembly capable of functionally describing its operation over its working range.

Certification means obtaining a certificate of conformity for an engine family that complies with the emission standards and requirements in this part.

Certified emission level means the highest deteriorated emission level in an engine family for a given pollutant from either transient or steady-state testing.

Compression-ignition means relating to a type of reciprocating, internal-combustion engine that is not a spark-ignition engine.

Constant-speed means relating to an engine governed to operate at rated speed.

Crankcase emissions means airborne substances emitted to the atmosphere from any part of the engine crankcase's ventilation or lubrication systems. The crankcase is the housing for the crankshaft and other related internal parts.

Designated Compliance Officer means the Manager, Engine Programs Group (6405-J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., Washington, DC 20460.

Designated Enforcement Officer means the Director, Air Enforcement Division

(2242A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

Deteriorated emission level means the emission level that results from applying the applicable deterioration factor to the official emission result of the emission-data engine.

Deterioration factor means a number that is added to or multiplied by a low-hour test result to project the emission rate at the end of the useful life.

Emission-control system means any device, system, or element of design that controls or reduces the regulated emissions from an engine.

Emission-data engine means an engine that is tested for certification.

Emission-related maintenance means maintenance that substantially affects emissions or is likely to substantially affect emissions deterioration.

Engine family means a group of engines with similar emission characteristics, as specified in §1039.230.

Engine manufacturer means the manufacturer of the engine. See the definition of "manufacturer" in this section.

Engine used in a locomotive means either an engine placed in the locomotive to move other equipment, freight, or passenger traffic; or an engine mounted on the locomotive to provide auxiliary power.

Exempted means relating to an engine that is not required to meet otherwise applicable standards because the engine conforms to regulatory conditions specified for an exemption in this part 1039 or in part 1068 of this chapter. Exempted engines are deemed to be "subject to" the standards of this part, even though they are not required to comply with the otherwise applicable requirements. Engines exempted with respect to a certain tier of standards may be required to comply with an earlier tier of standards as a condition of the exemption; for example, engines exempted with respect to Tier 4 standards may be required to comply with Tier 3 standards.

Excluded means relating to an engine that either:

- (1) Has been determined not to be a nonroad engine, as specified in 40 CFR 1068.30; or
- (2) Is a nonroad engine that, according to §1039.5, is not subject to this part 1039.

Exhaust-gas recirculation means an emission-control technology that reduces emissions by routing exhaust gases that had been exhausted from the combustion chamber(s) back into the engine to be mixed with incoming air prior to or during combustion. The use of valve timing to increase the amount of residual exhaust gas in the combustion chamber(s) that is mixed with incoming air prior to or during combustion is not considered to be exhaust-gas recirculation for the purposes of this part.

Family emission limit (FEL) means an emission level declared by the manufacturer to serve in place of an emission standard for certification under the emission-credit program in subpart H of this part. The family emission limit must be expressed to the same number of decimal places as the emission standard it replaces.

Fuel system means all components involved in transporting, metering, and mixing the fuel from the fuel tank to the combustion chamber(s), including the fuel tank, fuel tank cap, fuel pump, fuel filters, fuel lines, carburetor or fuel-injection components, and all fuel-system vents.

Fuel type means a general category of fuels such as diesel fuel or natural gas. There can be multiple grades within a single type of fuel, such as No. 1 diesel and No. 2 diesel.

Good engineering judgment has the meaning we give in 40 CFR 1068.5.

Hydrocarbon (HC) means the hydrocarbon group on which the emission standards are based for each fuel type. For petroleum-fueled engines and natural gas-fueled engines, HC means nonmethane hydrocarbon (NMHC). For alcohol-fueled engines, HC means total hydrocarbon equivalent (THCE).

Identification number means a unique specification (for example, model number/serial number combination) that allows someone to distinguish a particular engine from other similar engines.

Intermediate test speed has the meaning we give in 40 CFR 1065.515.

Manufacture means the physical and engineering process of designing, constructing, and assembling of a nonroad engine or a piece of nonroad equipment.

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures an engine, vehicle, or piece of equipment for sale in the United States or otherwise introduces a new nonroad engine into commerce in the United States. This includes importers who import engines, equipment, or vehicles for resale. (Note: In §1039.626, the term "equipment manufacturer" has a more narrow meaning; that narrow meaning only applies to that section.)

Marine engine means an engine that someone installs or intends to install on a marine vessel. There are two kinds of marine engines:

(1) Propulsion marine engine means a marine engine that moves a vessel through the water or directs the vessel's movement.

(2) Auxiliary marine engine means a marine engine not used for propulsion.

Marine vessel means a vehicle that is capable of operation in water but is not capable of operation out of water. Amphibious vehicles are not marine vessels.

Maximum engine power means the measured maximum brake power output of an engine. The maximum engine power of an engine configuration is the average maximum engine power of the engines within the configuration. The maximum engine power of an engine family is the highest maximum engine power of the engine configurations within the family. (Note: §1039.230 generally prohibits grouping engines from different power categories in the same engine family.)

Maximum test speed has the meaning we give in 40 CFR 1065.515.

Maximum test torque has the meaning we give in 40 CFR 1065.1001.

Model year means one of the following things:

(1) For freshly manufactured engines (see definition of "new nonroad engine," paragraph (1)), model year means one of the following:

(i) Calendar year.

(ii) Your annual new model production period if it is different than the calendar year.

This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a nonroad engine after being placed into service in a motor vehicle, model year means the calendar year in which the engine was originally produced (see definition of "new nonroad engine," paragraph (2)).

(3) For a nonroad engine excluded under §1039.5 that is later converted to operate in an application that is not excluded, model year means the calendar year in which the engine was originally produced (see definition of "new nonroad engine," paragraph (3)).

- (4) For engines that are not freshly manufactured but are installed in new nonroad equipment, model year means the calendar year in which the engine is installed in the new nonroad equipment. This installation date is based on the time that final assembly of the equipment is complete (see definition of “new nonroad engine,” paragraph (4)).
- (5) For an engine modified by an importer (not the original engine manufacturer) who has a certificate of conformity for the imported engine (see definition of “new nonroad engine,” paragraph (5)), model year means one of the following:
  - (i) The calendar year in which the importer finishes modifying and labeling the engine.
  - (ii) Your annual production period for producing engines if it is different than the calendar year; follow the guidelines in paragraph (1)(ii) of this definition.
- (6) For an engine you import that does not meet the criteria in paragraphs (1) through (5) of the definition of “new nonroad engine,” model year means the calendar year in which the engine manufacturer completed the original assembly of the engine. In general, this applies to used equipment that you import without conversion or major modification. Motor vehicle has the meaning we give in 40 CFR 85.1703(a). In general, motor vehicle means a self-propelled vehicle that can transport one or more people or any material, but doesn’t include any of the following:
  - (1) Vehicles having a maximum ground speed over level, paved surfaces no higher than 40 km per hour (25 miles per hour).
  - (2) Vehicles that lack features usually needed for safe, practical use on streets or highways—for example, safety features required by law, a reverse gear (except for motorcycles), or a differential.
  - (3) Vehicles whose operation on streets or highways would be unsafe, impractical, or highly unlikely. Examples are vehicles with tracks instead of wheels, very large size, or features associated with military vehicles, such as armor or weaponry.

New nonroad engine means any of the following things:

  - (1) A freshly manufactured nonroad engine for which the ultimate purchaser has never received the equitable or legal title. This kind of vehicle might commonly be thought of as “brand new.” In the case of this paragraph (1), the engine is no longer new when the ultimate purchaser receives this title or the product is placed into service, whichever comes first.
  - (2) An engine originally manufactured as a motor vehicle engine that is later intended to be used in a piece of nonroad equipment. In this case, the engine is no longer a motor vehicle engine and becomes a “new nonroad engine”. The engine is no longer new when it is placed into nonroad service.
  - (3) A nonroad engine that has been previously placed into service in an application we exclude under §1039.5, where that engine is installed in a piece of equipment for which these exclusions do not apply. The engine is no longer new when it is placed into nonroad service. For example, this would apply to a stationary engine that is no longer used in a stationary application.
  - (4) An engine not covered by paragraphs (1) through (3) of this definition that is intended to be installed in new nonroad equipment. The engine is no longer new when the ultimate purchaser receives a title for the equipment or the product is placed into service, whichever comes first. This generally includes installation of used engines in new equipment.
  - (5) An imported nonroad engine covered by a certificate of conformity issued under this part,

where someone other than the original engine manufacturer modifies the engine after its initial assembly and holds the certificate. The engine is no longer new when it is placed into nonroad service.

- (6) An imported nonroad engine that is not covered by a certificate of conformity issued under this part at the time of importation. This addresses uncertified engines and vehicles that have been placed into service in other countries and that someone seeks to import into the United States. Importation of this kind of new nonroad engine (or vehicle containing such an engine) is generally prohibited by 40 CFR part 1068.

New nonroad equipment means either of the following things:

- (1) A nonroad vehicle or other piece of equipment for which the ultimate purchaser has never received the equitable or legal title. The product is no longer new when the ultimate purchaser receives this title or the product is placed into service, whichever comes first.
- (2) An imported nonroad piece of equipment with an engine not covered by a certificate of conformity issued under this part at the time of importation and manufactured after the date for applying the requirements of this part.

Noncommercial fuel means a fuel that is not marketed or sold as a commercial product. For example, this includes methane produced and released from landfills or oil wells.

Noncompliant engine means an engine that was originally covered by a certificate of conformity, but is not in the certified configuration or otherwise does not comply with the conditions of the certificate.

Nonconforming engine means an engine not covered by a certificate of conformity that would otherwise be subject to emission standards.

Nonmethane hydrocarbon means the difference between the emitted mass of total hydrocarbons and the emitted mass of methane.

Nonroad means relating to nonroad engines or equipment that includes nonroad engines.

Nonroad engine has the meaning given in 40 CFR 1068.30. In general this means all internal- combustion engines except motor vehicle engines, stationary engines, or engines used solely for competition. This part does not apply to all nonroad engines (see §1039.5).

Nonroad equipment means a vehicle or piece of equipment that is powered by one or more nonroad engines.

Nonroad equipment manufacturer means any person engaged in manufacturing or assembling new nonroad vehicles or equipment or importing such vehicles or equipment for resale. This includes any person who acts for and is under the control of any such person in connection with distributing such vehicles or equipment. A nonroad vehicle or equipment manufacturer does not include any dealer with respect to new nonroad vehicles or equipment received by such person in commerce. A nonroad equipment manufacturer does not include any person engaged in the manufacturing or assembling of new nonroad vehicles or equipment who does not install an engine as part of that manufacturing or assembling process. All nonroad vehicle or equipment manufacturing entities under the control of the same person are considered to be a single nonroad equipment manufacturer.

Official emission result means the measured emission rate for a test engine on a given duty cycle before the application of any deterioration factor, but after the applicability of regeneration adjustment factors.

Opacity means the fraction of a beam of light, expressed in percent, which fails to

penetrate a plume of smoke.

Oxides of nitrogen has the meaning given it in 40 CFR part 1065

Particulate trap means a filtering device that is designed to physically trap all particulate matter above a certain size.

Placed into service means used for its intended purpose.

Point of first retail sale means the location at which the retail sale occurs. This generally means a dealership.

Power category means a specific range maximum engine power that defines the applicability of standards. For example, the 56-130 kW power category includes all engines with maximum power of at least 56 kW but less than 130 kW. See §1039.101 for a list of specific power categories. (Note: In some cases, FEL caps are based on subcategories of power categories.)

Rated speed means the maximum full load governed speed for governed engines and the speed of maximum horsepower for ungoverned engines.

Revoke means to discontinue the certificate for an engine family. If we revoke a certificate, you must apply for a new certificate before continuing to produce the affected engines. This does not apply to engines you no longer possess.

Round means to round numbers according to ASTM E29-02 (incorporated by reference in §1039.810), unless otherwise specified.

Scheduled maintenance means adjusting, repairing, removing, disassembling, cleaning, or replacing components or systems that is periodically needed to keep a part from failing or malfunctioning. It also may mean actions you expect are necessary to correct an overt indication of failure or malfunction for which periodic maintenance is not appropriate.

Small-volume engine manufacturer means an engine manufacturer that had engine families certified to meet the requirements of 40 CFR part 89 before 2003 and had annual U.S.-directed production of no more than 2,500 units in 2002 and all earlier calendar years. For manufacturers owned by a parent company, the limit applies to the production of the parent company and all of its subsidiaries.

Spark-ignition means relating to a gasoline-fueled engine or any other type of engine with a spark plug (or other sparking device) and with operating characteristics significantly similar to the theoretical Otto combustion cycle. Spark-ignition engines usually use a throttle to regulate intake air flow to control power during normal operation.

Suspend means to temporarily discontinue the certificate for an engine family. If we suspend a certificate, you may not sell engines from that engine family unless we reinstate the certificate or approve a new one.

Test engine means an engine in a test sample.

Test sample means the collection of engines selected from the population of an engine family for emission testing.

Tier 1 means relating to the Tier 1 emission standards, as shown in 40 CFR 89.112.

Tier 2 means relating to the Tier 2 emission standards, as shown in 40 CFR 89.112.

Tier 3 means relating to the Tier 3 emission standards, as shown in 40 CFR 89.112.

Tier 4 means relating to the Tier 4 emission standards, as shown in §1039.101. This includes the emission standards for all pollutants if an engine is subject to Tier 4 emission standards for any pollutant. For example, this includes the Tier 3 HC+NOx

standard during the phase-in period when engines are subject to the Tier 4 PM standard. Total hydrocarbon means the combined mass organic compounds measured by our total hydrocarbon test procedure, expressed as a hydrocarbon with a hydrogen-to-carbon mass ratio of 1.85:1.

Total hydrocarbon equivalent means the sum of the carbon mass contributions of non-oxygenated hydrocarbons, alcohols and aldehydes, or other organic compounds that are measured separately as contained in a gas sample, expressed as petroleum-fueled engine hydrocarbons. The hydrogen-to-carbon ratio of the equivalent hydrocarbon is 1.85:1.

Ultimate purchaser means, with respect to any new nonroad equipment or new nonroad engine, the first person who in good faith purchases such new nonroad equipment or new nonroad engine for purposes other than resale.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Commonwealth of the Northern Mariana Islands, Guam, American Samoa, and the U.S. Virgin Islands.

Upcoming model year means for an engine family the model year after the one currently in production.

U.S.-directed production volume means the number of engine units, subject to the requirements of this part, produced by a manufacturer for which the manufacturer has a reasonable assurance that sale was or will be made to ultimate purchasers in the United States.

Useful life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years. It is the period during which a new nonroad engine is required to comply with all applicable emission standards. See §1039.101(g).

Variable-speed engine means an engine that is not a constant-speed engine.

Void means to invalidate a certificate or an exemption. If we void a certificate, all the engines produced under that engine family for that model year are considered noncompliant, and you are liable for each engine produced under the certificate and may face civil or criminal penalties or both. This applies equally to all engines in the engine family including engines produced before we voided the certificate. If we void an exemption, all the engines produced under that exemption are considered uncertified (or nonconforming), and you are liable for each engine produced under the exemption and may face civil or criminal penalties or both. You may not produce any additional engines using the voided exemption.

Volatile liquid fuel means any fuel other than diesel or biodiesel that is a liquid at atmospheric pressure and has a Reid Vapor Pressure higher than 2.0 psi.

We (us, our) means the Administrator of the Environmental Protection Agency and any authorized representatives.

#### **§1039.805 What symbols, acronyms, and abbreviations does this part use?**

The following symbols, acronyms, and abbreviations apply to this part:

/C	degrees Celsius.
ASTM	American Society for Testing and Materials.
cc	cubic centimeters.

CFR	Code of Federal Regulations.
CI	compression-ignition.
cm	centimeter.
CO	carbon monoxide.
CO <sub>2</sub>	carbon dioxide.
EPA	Environmental Protection Agency.
FEL	Family Emission Limit.
g/kW-hr	grams per kilowatt-hour.
HC	hydrocarbon.
ISO	International Organization for Standardization.
kPa	kilopascals.
kW	kilowatts.
m	meters.
MIL	malfunction-indicator light.
mm Hg	millimeters of mercury.
NMHC	nonmethane hydrocarbons.
NO <sub>x</sub>	oxides of nitrogen (NO and NO <sub>2</sub> ).
psi	pounds per square inch of absolute pressure.
psig	pounds per square inch of gauge pressure.
rpm	revolutions per minute.
SAE	Society of Automotive Engineers.
SI	spark-ignition.
THC	total hydrocarbon.
THCE	total hydrocarbon equivalent.
TRU	transportation refrigeration unit
U.S.C.	United States Code.

**§1039.810 What materials does this part reference?**

We have incorporated by reference the documents listed in this section. The Director of the Federal Register approved the incorporation by reference as prescribed in 5 U.S.C. 552(a) and 1 CFR part 51. Anyone may inspect copies at the U.S. EPA, Air and Radiation Docket and Information Center, 1301 Constitution Ave., NW., Room B102, EPA West Building, Washington, DC 20460 or the Office of the Federal Register, 800 N. Capitol St., NW., 7th Floor, Suite 700, Washington, DC.

- (a) ASTM material. Table 1 of §1039.810 lists material from the American Society for Testing and Materials that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the American Society for Testing and Materials, 100 Barr Harbor Dr., West Conshohocken, PA 19428. Table 1 follows:

Table 1 of §1039.810—ASTM Materials

Document number and name	Part 1039 reference
ASTM E29-02, Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications.	1039.801

- (b) SAE material. Table 2 of §1039.810 lists material from the Society of Automotive Engineering that we have incorporated by reference. The first column lists the number and name of the material. The second column lists the sections of this part where we reference it. Anyone may purchase copies of these materials from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096. Table 2 follows:

Table 2 of §1039.810—SAE Materials

Document number and name	Part 1039 reference
SAE J1930, Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations, and Acronyms, May 1998.	1039.135

**§1039.815 How should I request EPA to keep my information confidential?**

- (a) Clearly show what you consider confidential by marking, circling, bracketing, stamping, or some other method. We will store your confidential information as described in 40 CFR part 2. Also, we will disclose it only as specified in 40 CFR part 2.
- (b) If you send us a second copy without the confidential information, we will assume it contains nothing confidential whenever we need to release information from it.
- (c) If you send us information without claiming it is confidential, we may make it available to the public without further notice to you, as described in 40 CFR 2.204.

**§1039.820 How do I request a hearing?**

See 40 CFR part 1068, subpart G, for information related to hearings.

Appendix I to Part 1039— Nonroad Compression-ignition (CI) Steady-state Cycle for Constant-Speed Engines

Mode Number	Engine Speed	Observed Torque <sup>1</sup>	Minimum	
			Time (minutes)	Weighting Factor
1	Maximum test	100	3.0	0.05
2	Maximum test	75	3.0	0.25
3	Maximum test	50	3.0	0.30
4	Maximum test	25	3.0	0.30
5	Maximum test	10	3.0	0.10

<sup>1</sup>The percent torque is relative to the maximum torque at maximum test speed.

Appendix II to Part 1039— [Reserved]

Appendix III to Part 1039— Nonroad Compression-ignition (CI) Steady-state Cycle for Variable-Speed Engines with Maximum Power below 19 kW

Mode Number	Engine Speed	Observed Torque <sup>1</sup>	Minimum	
			Time (minutes)	Weighting Factor
1	Maximum test speed	100	3.0	0.09
2	Maximum test speed	75	3.0	0.20
3	Maximum test speed	50	3.0	0.29
4	Maximum test speed	25	3.0	0.30
5	Maximum test speed	10	3.0	0.07
6	Idle	0	3.0	0.05

<sup>1</sup>The percent torque is relative to the maximum torque at maximum test speed.

Appendix IV to Part 1039— Nonroad Compression-ignition (CI) Steady-state Cycle for Variable-Speed Engines with Maximum Power at or above 19 kW

Mode Number	Engine Speed	Observed Torque <sup>1</sup>	Minimum Time (minutes)	Weighting Factor
1	Maximum test speed	100	3.0	0.15
2	Maximum test speed	75	3.0	0.15
3	Maximum test speed	50	3.0	0.15
4	Maximum test speed	10	3.0	0.10
5	Intermediate test speed	100	3.0	0.10
6	Intermediate test speed	75	3.0	0.10
7	Intermediate test speed	50	3.0	0.10
8	Idle	0	3.0	0.15

<sup>1</sup>The percent torque is relative to the maximum torque at the given engine speed.

Appendix V to Part 1039— Nonroad Compression-ignition (CI) Transient Cycle for Constant-Speed Engines

Time (s)	Normalized Speed	Normalized Torque			
1	58%	5%	55	93%	42%
2	58%	5%	56	93%	42%
3	58%	5%	57	93%	35%
4	58%	5%	58	93%	29%
5	58%	5%	59	93%	28%
6	58%	5%	60	93%	28%
7	58%	5%	61	93%	25%
8	58%	5%	62	93%	28%
9	58%	5%	63	93%	26%
10	58%	5%	64	93%	26%
11	58%	5%	65	95%	24%
12	58%	5%	66	95%	17%
13	58%	5%	67	95%	13%
14	58%	5%	68	95%	10%
15	58%	5%	69	95%	9%
16	58%	5%	70	94%	51%
17	58%	5%	71	93%	45%
18	58%	5%	72	93%	42%
19	58%	5%	73	94%	40%
20	58%	5%	74	93%	30%
21	65%	8%	75	93%	27%
22	72%	11%	76	93%	25%
23	79%	14%	77	93%	23%
24	86%	17%	78	93%	22%
25	93%	20%	79	94%	21%
26	93%	20%	80	93%	20%
27	93%	20%	81	95%	20%
28	93%	20%	82	95%	19%
29	93%	20%	83	95%	14%
30	93%	20%	84	95%	11%
31	93%	20%	85	95%	9%
32	94%	20%	86	95%	8%
33	94%	22%	87	95%	7%
34	94%	23%	88	95%	7%
35	93%	23%	89	95%	6%
36	93%	25%	90	95%	6%
37	93%	24%	91	95%	6%
38	94%	23%	92	95%	6%
39	93%	21%	93	81%	5%
40	94%	21%	94	93%	53%
41	96%	22%	95	93%	43%
42	95%	19%	96	93%	35%
43	95%	14%	97	93%	34%
44	95%	10%	98	93%	29%
45	93%	50%	99	93%	26%
46	93%	36%	100	93%	25%
47	93%	29%	101	93%	23%
48	93%	26%	102	93%	21%
49	95%	29%	103	93%	20%
50	95%	26%	104	93%	20%
51	95%	18%	105	94%	19%
52	95%	14%	106	94%	21%
53	95%	10%	107	94%	22%
54	95%	9%	108	93%	21%
			109	93%	22%
			110	93%	23%
			111	93%	22%
			112	93%	22%

113	94%	20%	173	58%	6%
114	93%	20%	174	58%	6%
115	93%	20%	175	58%	6%
116	93%	19%	176	58%	6%
117	94%	20%	177	58%	6%
118	94%	21%	178	58%	50%
119	93%	23%	179	94%	49%
120	94%	23%	180	93%	41%
121	93%	23%	181	94%	36%
122	93%	21%	182	93%	35%
123	93%	19%	183	94%	28%
124	94%	23%	184	93%	24%
125	94%	22%	185	93%	21%
126	94%	21%	186	93%	24%
127	94%	23%	187	93%	25%
128	94%	24%	188	93%	28%
129	93%	23%	189	94%	29%
130	94%	39%	190	93%	40%
131	94%	40%	191	94%	33%
132	94%	34%	192	93%	29%
133	94%	34%	193	93%	29%
134	94%	32%	194	93%	23%
135	94%	32%	195	93%	24%
136	94%	30%	196	93%	21%
137	94%	27%	197	93%	32%
138	94%	29%	198	93%	29%
139	94%	35%	199	94%	32%
140	94%	41%	200	93%	32%
141	94%	43%	201	93%	28%
142	94%	42%	202	94%	35%
143	94%	46%	203	93%	30%
144	94%	37%	204	94%	27%
145	94%	34%	205	94%	26%
146	94%	29%	206	94%	23%
147	94%	27%	207	93%	31%
148	94%	27%	208	94%	27%
149	94%	28%	209	94%	23%
150	94%	29%	210	94%	28%
151	93%	30%	211	94%	41%
152	93%	27%	212	93%	56%
153	94%	29%	213	93%	43%
154	95%	27%	214	93%	37%
155	95%	19%	215	93%	35%
156	95%	14%	216	94%	33%
157	95%	11%	217	93%	29%
158	95%	9%	218	94%	25%
159	95%	8%	219	94%	23%
160	95%	7%	220	94%	23%
161	95%	7%	221	94%	20%
162	95%	6%	222	94%	29%
163	95%	6%	223	94%	34%
164	95%	6%	224	93%	27%
165	93%	5%	225	94%	28%
166	59%	5%	226	94%	34%
167	58%	6%	227	93%	34%
168	58%	6%	228	94%	29%
169	58%	6%	229	92%	49%
170	58%	6%	230	94%	43%
171	58%	6%	231	94%	39%
172	58%	6%	232	94%	35%

233	93%	54%	293	93%	52%
234	94%	50%	294	93%	42%
235	94%	40%	295	93%	40%
236	94%	33%	296	93%	35%
237	94%	37%	297	94%	35%
238	94%	41%	298	93%	36%
239	93%	31%	299	94%	39%
240	94%	25%	300	94%	38%
241	94%	22%	301	94%	30%
242	94%	22%	302	94%	35%
243	94%	26%	303	94%	35%
244	94%	26%	304	94%	36%
245	94%	34%	305	94%	30%
246	96%	30%	306	93%	27%
247	95%	71%	307	94%	27%
248	94%	52%	308	94%	33%
249	93%	42%	309	94%	29%
250	93%	40%	310	94%	25%
251	93%	32%	311	94%	28%
252	94%	31%	312	95%	26%
253	94%	27%	313	94%	95%
254	94%	27%	314	94%	101%
255	94%	28%	315	93%	92%
256	93%	24%	316	93%	64%
257	94%	23%	317	93%	49%
258	94%	28%	318	94%	41%
259	93%	29%	319	93%	37%
260	93%	23%	320	93%	31%
261	93%	26%	321	94%	26%
262	94%	21%	322	94%	36%
263	93%	21%	323	93%	29%
264	93%	24%	324	93%	23%
265	94%	25%	325	93%	21%
266	94%	25%	326	94%	28%
267	94%	34%	327	93%	26%
268	93%	35%	328	94%	35%
269	93%	27%	329	93%	51%
270	93%	23%	330	94%	43%
271	93%	26%	331	93%	33%
272	93%	23%	332	93%	29%
273	93%	25%	333	96%	27%
274	94%	23%	334	95%	22%
275	93%	22%	335	93%	64%
276	94%	26%	336	93%	46%
277	94%	26%	337	93%	37%
278	93%	29%	338	93%	31%
279	94%	29%	339	93%	33%
280	94%	28%	340	94%	33%
281	94%	23%	341	93%	30%
282	94%	45%	342	93%	26%
283	93%	37%	343	93%	34%
284	94%	29%	344	93%	37%
285	94%	28%	345	94%	29%
286	95%	27%	346	94%	27%
287	95%	19%	347	93%	36%
288	95%	14%	348	95%	30%
289	95%	11%	349	95%	22%
290	95%	9%	350	95%	16%
291	95%	8%	351	95%	12%
292	95%	7%	352	95%	10%

353	94%	43%	413	93%	21%
354	93%	34%	414	93%	20%
355	94%	28%	415	94%	19%
356	94%	34%	416	94%	21%
357	94%	28%	417	94%	21%
358	93%	33%	418	93%	19%
359	94%	31%	419	93%	22%
360	94%	41%	420	94%	21%
361	94%	31%	421	94%	23%
362	93%	26%	422	94%	25%
363	94%	25%	423	94%	26%
364	94%	23%	424	94%	34%
365	94%	27%	425	94%	28%
366	94%	23%	426	94%	24%
367	94%	23%	427	94%	24%
368	93%	22%	428	94%	25%
369	94%	23%	429	94%	23%
370	94%	49%	430	94%	24%
371	93%	40%	431	94%	25%
372	94%	37%	432	94%	26%
373	94%	32%	433	94%	25%
374	93%	26%	434	94%	26%
375	94%	23%	435	94%	25%
376	94%	26%	436	94%	23%
377	94%	28%	437	93%	23%
378	93%	30%	438	94%	21%
379	93%	25%	439	93%	19%
380	94%	24%	440	94%	18%
381	94%	23%	441	93%	19%
382	94%	22%	442	94%	20%
383	94%	20%	443	94%	21%
384	94%	22%	444	94%	20%
385	94%	25%	445	94%	21%
386	93%	36%	446	94%	20%
387	93%	40%	447	93%	46%
388	94%	35%	448	93%	39%
389	93%	33%	449	94%	32%
390	93%	29%	450	96%	28%
391	93%	27%	451	95%	24%
392	93%	23%	452	95%	17%
393	93%	23%	453	95%	13%
394	93%	23%	454	95%	10%
395	94%	23%	455	95%	9%
396	93%	21%	456	95%	8%
397	93%	22%	457	95%	7%
398	94%	22%	458	95%	7%
399	94%	23%	459	95%	6%
400	94%	23%	460	95%	6%
401	93%	24%	461	95%	6%
402	94%	23%	462	80%	5%
403	93%	20%	463	79%	44%
404	93%	21%	464	94%	33%
405	93%	22%	465	93%	27%
406	93%	23%	466	93%	30%
407	94%	23%	467	94%	41%
408	93%	22%	468	93%	33%
409	93%	21%	469	93%	28%
410	93%	23%	470	93%	27%
411	94%	23%	471	94%	30%
412	93%	21%	472	93%	30%

473	93%	28%	533	93%	76%
474	93%	29%	534	95%	60%
475	93%	23%	535	95%	44%
476	93%	22%	536	92%	68%
477	93%	30%	537	94%	81%
478	94%	31%	538	93%	73%
479	94%	33%	539	93%	57%
480	94%	29%	540	94%	46%
481	93%	32%	541	94%	71%
482	93%	25%	542	93%	57%
483	93%	22%	543	93%	54%
484	93%	26%	544	93%	46%
485	94%	23%	545	95%	38%
486	93%	19%	546	93%	56%
487	93%	20%	547	93%	41%
488	93%	29%	548	94%	33%
489	94%	23%	549	92%	69%
490	93%	23%	550	93%	48%
491	94%	33%	551	93%	40%
492	93%	39%	552	92%	67%
493	94%	39%	553	93%	46%
494	93%	36%	554	93%	36%
495	93%	36%	555	96%	31%
496	94%	32%	556	93%	61%
497	94%	27%	557	94%	50%
498	93%	23%	558	94%	40%
499	96%	32%	559	92%	64%
500	95%	72%	560	93%	49%
501	93%	56%	561	94%	34%
502	93%	46%	562	92%	62%
503	93%	38%	563	93%	48%
504	92%	62%	564	94%	36%
505	94%	49%	565	92%	62%
506	94%	44%	566	93%	48%
507	93%	59%	567	93%	42%
508	93%	40%	568	93%	69%
509	96%	30%	569	93%	55%
510	93%	70%	570	94%	42%
511	93%	47%	571	93%	30%
512	96%	39%	572	94%	25%
513	94%	66%	573	93%	23%
514	93%	49%	574	93%	22%
515	94%	36%	575	93%	28%
516	94%	68%	576	93%	23%
517	93%	56%	577	93%	21%
518	93%	42%	578	93%	23%
519	92%	67%	579	95%	23%
520	94%	47%	580	93%	47%
521	93%	56%	581	93%	42%
522	94%	86%	582	93%	34%
523	93%	56%	583	93%	30%
524	96%	39%	584	93%	47%
525	93%	57%	585	93%	34%
526	93%	43%	586	93%	59%
527	92%	68%	587	93%	51%
528	93%	49%	588	93%	37%
529	95%	35%	589	93%	29%
530	93%	55%	590	93%	23%
531	93%	43%	591	93%	31%
532	93%	73%	592	93%	26%

593	94%	25%	653	94%	20%
594	93%	21%	654	93%	21%
595	93%	29%	655	93%	22%
596	93%	24%	656	95%	23%
597	93%	28%	657	95%	18%
598	93%	27%	658	95%	13%
599	93%	24%	659	95%	10%
600	93%	21%	660	95%	9%
601	93%	20%	661	95%	8%
602	93%	24%	662	95%	7%
603	93%	26%	663	95%	7%
604	93%	31%	664	95%	6%
605	93%	26%	665	95%	6%
606	93%	25%	666	95%	6%
607	93%	27%	667	95%	6%
608	93%	26%	668	66%	5%
609	93%	23%	669	57%	6%
610	94%	32%	670	58%	6%
611	93%	29%	671	58%	6%
612	93%	33%	672	58%	6%
613	92%	52%	673	58%	6%
614	94%	63%	674	58%	6%
615	93%	48%	675	58%	6%
616	95%	38%	676	58%	6%
617	95%	26%	677	58%	6%
618	95%	18%	678	58%	6%
619	95%	14%	679	58%	6%
620	95%	10%	680	58%	6%
621	95%	9%	681	58%	6%
622	92%	40%	682	58%	6%
623	95%	31%	683	58%	6%
624	95%	23%	684	58%	6%
625	93%	59%	685	58%	6%
626	93%	47%	686	58%	6%
627	94%	43%	687	58%	6%
628	94%	48%	688	58%	6%
629	94%	37%	689	58%	6%
630	93%	31%	690	58%	6%
631	93%	29%	691	58%	6%
632	94%	26%	692	58%	6%
633	93%	23%	693	58%	6%
634	93%	21%	694	58%	6%
635	93%	26%	695	58%	6%
636	94%	24%	696	58%	6%
637	93%	23%	697	74%	55%
638	94%	20%	698	93%	45%
639	93%	17%	699	93%	36%
640	93%	16%	700	93%	29%
641	93%	17%	701	93%	23%
642	93%	15%	702	93%	26%
643	93%	19%	703	93%	24%
644	93%	19%	704	93%	20%
645	93%	19%	705	93%	19%
646	93%	21%	706	93%	20%
647	93%	23%	707	93%	24%
648	93%	24%	708	93%	25%
649	93%	23%	709	93%	21%
650	93%	23%	710	93%	19%
651	94%	20%	711	93%	17%
652	93%	19%	712	93%	16%

713	93%	20%	773	93%	33%
714	93%	17%	774	93%	29%
715	93%	20%	775	93%	33%
716	93%	22%	776	96%	28%
717	93%	22%	777	95%	69%
718	93%	25%	778	93%	64%
719	93%	42%	779	93%	55%
720	93%	30%	780	93%	43%
721	93%	26%	781	93%	32%
722	93%	22%	782	93%	30%
723	93%	24%	783	93%	42%
724	93%	20%	784	93%	33%
725	93%	18%	785	93%	31%
726	93%	18%	786	93%	24%
727	93%	19%	787	93%	23%
728	93%	17%	788	93%	24%
729	93%	17%	789	93%	20%
730	94%	23%	790	93%	24%
731	93%	21%	791	93%	26%
732	93%	20%	792	93%	24%
733	93%	17%	793	93%	27%
734	93%	16%	794	93%	24%
735	93%	15%	795	93%	22%
736	93%	19%	796	93%	19%
737	93%	19%	797	93%	16%
738	93%	20%	798	93%	15%
739	93%	20%	799	93%	14%
740	93%	20%	800	93%	17%
741	93%	19%	801	93%	22%
742	93%	20%	802	93%	23%
743	93%	18%	803	93%	21%
744	93%	18%	804	93%	18%
745	93%	18%	805	93%	21%
746	93%	16%	806	93%	18%
747	93%	18%	807	93%	18%
748	93%	20%	808	93%	17%
749	93%	25%	809	96%	18%
750	93%	25%	810	95%	17%
751	93%	22%	811	95%	13%
752	93%	21%	812	94%	69%
753	93%	18%	813	93%	54%
754	93%	19%	814	93%	40%
755	96%	23%	815	93%	29%
756	95%	19%	816	93%	24%
757	95%	14%	817	93%	31%
758	95%	10%	818	93%	27%
759	95%	9%	819	93%	29%
760	95%	8%	820	93%	23%
761	95%	7%	821	93%	23%
762	95%	7%	822	93%	21%
763	95%	6%	823	93%	18%
764	95%	6%	824	93%	24%
765	92%	53%	825	93%	22%
766	93%	38%	826	93%	21%
767	93%	30%	827	93%	18%
768	96%	30%	828	93%	21%
769	93%	65%	829	93%	19%
770	94%	76%	830	93%	23%
771	93%	53%	831	93%	29%
772	93%	43%	832	93%	41%

833	93%	37%	893	93%	18%
834	93%	29%	894	93%	18%
835	93%	24%	895	93%	21%
836	93%	21%	896	93%	21%
837	93%	23%	897	93%	18%
838	93%	20%	898	94%	24%
839	93%	18%	899	93%	28%
840	93%	17%	900	93%	23%
841	93%	18%	901	93%	19%
842	93%	19%	902	93%	20%
843	93%	22%	903	93%	20%
844	93%	21%	904	93%	29%
845	93%	21%	905	93%	23%
846	93%	19%	906	93%	25%
847	93%	19%	907	93%	23%
848	93%	18%	908	93%	23%
849	93%	19%	909	93%	23%
850	93%	17%	910	93%	21%
851	93%	16%	911	93%	21%
852	93%	19%	912	93%	22%
853	93%	18%	913	93%	30%
854	94%	24%	914	93%	33%
855	93%	25%	915	93%	25%
856	93%	25%	916	93%	29%
857	93%	21%	917	93%	27%
858	93%	17%	918	93%	23%
859	96%	19%	919	93%	21%
860	95%	18%	920	93%	21%
861	93%	54%	921	93%	19%
862	93%	61%	922	93%	20%
863	93%	43%	923	93%	24%
864	93%	31%	924	93%	23%
865	93%	24%	925	93%	21%
866	93%	23%	926	93%	44%
867	93%	22%	927	93%	34%
868	93%	21%	928	93%	28%
869	93%	20%	929	93%	37%
870	93%	16%	930	93%	29%
871	93%	16%	931	93%	27%
872	93%	16%	932	93%	33%
873	93%	31%	933	93%	28%
874	93%	30%	934	93%	22%
875	93%	27%	935	96%	30%
876	93%	23%	936	95%	25%
877	93%	23%	937	95%	17%
878	93%	21%	938	95%	13%
879	93%	20%	939	95%	10%
880	93%	18%	940	95%	9%
881	93%	16%	941	95%	8%
882	93%	18%	942	95%	7%
883	93%	16%	943	95%	7%
884	93%	17%	944	95%	6%
885	93%	20%	945	95%	6%
886	93%	20%	946	93%	37%
887	93%	22%	947	93%	34%
888	93%	20%	948	93%	29%
889	93%	17%	949	93%	23%
890	93%	17%	950	93%	23%
891	93%	17%	951	93%	21%
892	93%	16%	952	93%	20%

953	93%	29%	1013	93%	29%
954	93%	27%	1014	93%	24%
955	93%	26%	1015	93%	24%
956	93%	35%	1016	93%	24%
957	93%	43%	1017	93%	23%
958	95%	35%	1018	93%	20%
959	95%	24%	1019	93%	20%
960	95%	17%	1020	93%	18%
961	95%	13%	1021	93%	19%
962	95%	10%	1022	93%	19%
963	95%	9%	1023	93%	16%
964	95%	8%	1024	93%	16%
965	95%	7%	1025	93%	16%
966	95%	7%	1026	93%	17%
967	95%	6%	1027	93%	21%
968	93%	36%	1028	93%	20%
969	93%	30%	1029	93%	20%
970	93%	25%	1030	93%	17%
971	93%	21%	1031	93%	19%
972	93%	22%	1032	93%	16%
973	93%	19%	1033	93%	18%
974	93%	34%	1034	93%	16%
975	93%	36%	1035	93%	16%
976	93%	31%	1036	93%	16%
977	93%	26%	1037	93%	17%
978	93%	27%	1038	93%	16%
979	93%	21%	1039	93%	17%
980	93%	22%	1040	93%	18%
981	93%	18%	1041	93%	17%
982	93%	18%	1042	93%	16%
983	93%	19%	1043	93%	17%
984	93%	19%	1044	93%	17%
985	93%	23%	1045	93%	22%
986	93%	22%	1046	93%	19%
987	93%	20%	1047	93%	19%
988	93%	23%	1048	95%	21%
989	93%	20%	1049	95%	16%
990	93%	18%	1050	95%	12%
991	93%	18%	1051	95%	10%
992	93%	16%	1052	96%	8%
993	93%	19%	1053	96%	7%
994	94%	25%	1054	95%	7%
995	93%	30%	1055	96%	7%
996	93%	29%	1056	95%	6%
997	93%	23%	1057	96%	6%
998	93%	24%	1058	96%	6%
999	93%	22%	1059	88%	5%
1000	94%	20%	1060	89%	49%
1001	93%	17%	1061	93%	34%
1002	93%	16%	1062	93%	27%
1003	93%	16%	1063	93%	26%
1004	93%	15%	1064	93%	25%
1005	93%	17%	1065	93%	22%
1006	93%	18%	1066	93%	23%
1007	93%	20%	1067	93%	21%
1008	93%	21%	1068	93%	21%
1009	93%	18%	1069	93%	23%
1010	93%	17%	1070	93%	23%
1011	92%	54%	1071	93%	23%
1012	93%	38%	1072	93%	23%

1073	93%	23%	1133	93%	28%
1074	93%	22%	1134	94%	33%
1075	93%	22%	1135	93%	31%
1076	93%	24%	1136	93%	30%
1077	93%	23%	1137	94%	42%
1078	93%	23%	1138	93%	31%
1079	93%	21%	1139	93%	29%
1080	93%	19%	1140	93%	27%
1081	93%	20%	1141	93%	23%
1082	93%	20%	1142	93%	23%
1083	93%	22%	1143	93%	20%
1084	93%	26%	1144	93%	20%
1085	93%	21%	1145	93%	23%
1086	93%	20%	1146	93%	22%
1087	93%	18%	1147	93%	23%
1088	93%	22%	1148	93%	25%
1089	93%	20%	1149	93%	20%
1090	94%	27%	1150	93%	25%
1091	93%	22%	1151	93%	23%
1092	93%	23%	1152	93%	23%
1093	93%	21%	1153	93%	24%
1094	93%	22%	1154	93%	28%
1095	95%	22%	1155	93%	23%
1096	95%	16%	1156	93%	24%
1097	95%	12%	1157	93%	34%
1098	95%	10%	1158	93%	31%
1099	95%	9%	1159	93%	35%
1100	95%	7%	1160	93%	31%
1101	96%	7%	1161	93%	32%
1102	95%	7%	1162	93%	31%
1103	95%	6%	1163	93%	30%
1104	92%	42%	1164	93%	23%
1105	93%	36%	1165	93%	23%
1106	93%	33%	1166	93%	36%
1107	92%	60%	1167	93%	32%
1108	93%	48%	1168	93%	25%
1109	93%	36%	1169	93%	31%
1110	93%	30%	1170	93%	33%
1111	93%	28%	1171	93%	33%
1112	93%	24%	1172	93%	33%
1113	93%	24%	1173	93%	33%
1114	93%	23%	1174	93%	33%
1115	93%	23%	1175	93%	33%
1116	93%	25%	1176	86%	28%
1117	93%	27%	1177	79%	21%
1118	93%	29%	1178	72%	16%
1119	93%	26%	1179	65%	10%
1120	93%	26%	1180	58%	5%
1121	93%	21%	1181	58%	5%
1122	93%	23%	1182	58%	5%
1123	93%	23%	1183	58%	5%
1124	94%	23%	1184	58%	5%
1125	93%	40%	1185	58%	5%
1126	94%	67%	1186	58%	5%
1127	93%	46%	1187	58%	5%
1128	93%	38%	1188	58%	5%
1129	93%	29%	1189	58%	5%
1130	93%	28%	1190	58%	5%
1131	93%	27%	1191	58%	5%
1132	93%	29%	1192	58%	5%

1193	58%	5%
1194	58%	5%
1195	58%	5%
1196	58%	5%
1197	58%	5%

1198	58%	5%
1199	58%	5%

Appendix VI to Part 1039— Nonroad Compression-ignition (CI) Composite Transient Cycle

Time (s)	Normalized Speed	Normalized Torque			
1	0%	0%	58	23%	1%
2	0%	0%	59	1%	3%
3	0%	0%	60	1%	8%
4	0%	0%	61	1%	3%
5	0%	0%	62	1%	5%
6	0%	0%	63	1%	6%
7	0%	0%	64	1%	4%
8	0%	0%	65	1%	4%
9	0%	0%	66	0%	6%
10	0%	0%	67	1%	4%
11	0%	0%	68	9%	21%
12	0%	0%	69	25%	56%
13	0%	0%	70	64%	26%
14	0%	0%	71	60%	31%
15	0%	0%	72	63%	20%
16	0%	0%	73	62%	24%
17	0%	0%	74	64%	8%
18	0%	0%	75	58%	44%
19	0%	0%	76	65%	10%
20	0%	0%	77	65%	12%
21	0%	0%	78	68%	23%
22	0%	0%	79	69%	30%
23	0%	0%	80	71%	30%
24	1%	3%	81	74%	15%
25	1%	3%	82	71%	23%
26	1%	3%	83	73%	20%
27	1%	3%	84	73%	21%
28	1%	3%	85	73%	19%
29	1%	3%	86	70%	33%
30	1%	6%	87	70%	34%
31	1%	6%	88	65%	47%
32	2%	1%	89	66%	47%
33	4%	13%	90	64%	53%
34	7%	18%	91	65%	45%
35	9%	21%	92	66%	38%
36	17%	20%	93	67%	49%
37	33%	42%	94	69%	39%
38	57%	46%	95	69%	39%
39	44%	33%	96	66%	42%
40	31%	0%	97	71%	29%
41	22%	27%	98	75%	29%
42	33%	43%	99	72%	23%
43	80%	49%	100	74%	22%
44	105%	47%	101	75%	24%
45	98%	70%	102	73%	30%
46	104%	36%	103	74%	24%
47	104%	65%	104	77%	6%
48	96%	71%	105	76%	12%
49	101%	62%	106	74%	39%
50	102%	51%	107	72%	30%
51	102%	50%	108	75%	22%
52	102%	46%	109	78%	64%
53	102%	41%	110	102%	34%
54	102%	31%	111	103%	28%
55	89%	2%	112	103%	28%
56	82%	0%	113	103%	19%
57	47%	1%	114	103%	32%
			115	104%	25%
			116	103%	38%

117	103%	39%	177	19%	10%
118	103%	34%	178	1%	18%
119	102%	44%	179	0%	16%
120	103%	38%	180	1%	3%
121	102%	43%	181	1%	4%
122	103%	34%	182	1%	5%
123	102%	41%	183	1%	6%
124	103%	44%	184	1%	5%
125	103%	37%	185	1%	3%
126	103%	27%	186	1%	4%
127	104%	13%	187	1%	4%
128	104%	30%	188	1%	6%
129	104%	19%	189	8%	18%
130	103%	28%	190	20%	51%
131	104%	40%	191	49%	19%
132	104%	32%	192	41%	13%
133	101%	63%	193	31%	16%
134	102%	54%	194	28%	21%
135	102%	52%	195	21%	17%
136	102%	51%	196	31%	21%
137	103%	40%	197	21%	8%
138	104%	34%	198	0%	14%
139	102%	36%	199	0%	12%
140	104%	44%	200	3%	8%
141	103%	44%	201	3%	22%
142	104%	33%	202	12%	20%
143	102%	27%	203	14%	20%
144	103%	26%	204	16%	17%
145	79%	53%	205	20%	18%
146	51%	37%	206	27%	34%
147	24%	23%	207	32%	33%
148	13%	33%	208	41%	31%
149	19%	55%	209	43%	31%
150	45%	30%	210	37%	33%
151	34%	7%	211	26%	18%
152	14%	4%	212	18%	29%
153	8%	16%	213	14%	51%
154	15%	6%	214	13%	11%
155	39%	47%	215	12%	9%
156	39%	4%	216	15%	33%
157	35%	26%	217	20%	25%
158	27%	38%	218	25%	17%
159	43%	40%	219	31%	29%
160	14%	23%	220	36%	66%
161	10%	10%	221	66%	40%
162	15%	33%	222	50%	13%
163	35%	72%	223	16%	24%
164	60%	39%	224	26%	50%
165	55%	31%	225	64%	23%
166	47%	30%	226	81%	20%
167	16%	7%	227	83%	11%
168	0%	6%	228	79%	23%
169	0%	8%	229	76%	31%
170	0%	8%	230	68%	24%
171	0%	2%	231	59%	33%
172	2%	17%	232	59%	3%
173	10%	28%	233	25%	7%
174	28%	31%	234	21%	10%
175	33%	30%	235	20%	19%
176	36%	0%	236	4%	10%

237	5%	7%	297	63%	58%
238	4%	5%	298	53%	31%
239	4%	6%	299	51%	24%
240	4%	6%	300	48%	40%
241	4%	5%	301	39%	0%
242	7%	5%	302	35%	18%
243	16%	28%	303	36%	16%
244	28%	25%	304	29%	17%
245	52%	53%	305	28%	21%
246	50%	8%	306	31%	15%
247	26%	40%	307	31%	10%
248	48%	29%	308	43%	19%
249	54%	39%	309	49%	63%
250	60%	42%	310	78%	61%
251	48%	18%	311	78%	46%
252	54%	51%	312	66%	65%
253	88%	90%	313	78%	97%
254	103%	84%	314	84%	63%
255	103%	85%	315	57%	26%
256	102%	84%	316	36%	22%
257	58%	66%	317	20%	34%
258	64%	97%	318	19%	8%
259	56%	80%	319	9%	10%
260	51%	67%	320	5%	5%
261	52%	96%	321	7%	11%
262	63%	62%	322	15%	15%
263	71%	6%	323	12%	9%
264	33%	16%	324	13%	27%
265	47%	45%	325	15%	28%
266	43%	56%	326	16%	28%
267	42%	27%	327	16%	31%
268	42%	64%	328	15%	20%
269	75%	74%	329	17%	0%
270	68%	96%	330	20%	34%
271	86%	61%	331	21%	25%
272	66%	0%	332	20%	0%
273	37%	0%	333	23%	25%
274	45%	37%	334	30%	58%
275	68%	96%	335	63%	96%
276	80%	97%	336	83%	60%
277	92%	96%	337	61%	0%
278	90%	97%	338	26%	0%
279	82%	96%	339	29%	44%
280	94%	81%	340	68%	97%
281	90%	85%	341	80%	97%
282	96%	65%	342	88%	97%
283	70%	96%	343	99%	88%
284	55%	95%	344	102%	86%
285	70%	96%	345	100%	82%
286	79%	96%	346	74%	79%
287	81%	71%	347	57%	79%
288	71%	60%	348	76%	97%
289	92%	65%	349	84%	97%
290	82%	63%	350	86%	97%
291	61%	47%	351	81%	98%
292	52%	37%	352	83%	83%
293	24%	0%	353	65%	96%
294	20%	7%	354	93%	72%
295	39%	48%	355	63%	60%
296	39%	54%	356	72%	49%

357	56%	27%	417	89%	56%
358	29%	0%	418	88%	58%
359	18%	13%	419	78%	69%
360	25%	11%	420	98%	39%
361	28%	24%	421	64%	61%
362	34%	53%	422	90%	34%
363	65%	83%	423	88%	38%
364	80%	44%	424	97%	62%
365	77%	46%	425	100%	53%
366	76%	50%	426	81%	58%
367	45%	52%	427	74%	51%
368	61%	98%	428	76%	57%
369	61%	69%	429	76%	72%
370	63%	49%	430	85%	72%
371	32%	0%	431	84%	60%
372	10%	8%	432	83%	72%
373	17%	7%	433	83%	72%
374	16%	13%	434	86%	72%
375	11%	6%	435	89%	72%
376	9%	5%	436	86%	72%
377	9%	12%	437	87%	72%
378	12%	46%	438	88%	72%
379	15%	30%	439	88%	71%
380	26%	28%	440	87%	72%
381	13%	9%	441	85%	71%
382	16%	21%	442	88%	72%
383	24%	4%	443	88%	72%
384	36%	43%	444	84%	72%
385	65%	85%	445	83%	73%
386	78%	66%	446	77%	73%
387	63%	39%	447	74%	73%
388	32%	34%	448	76%	72%
389	46%	55%	449	46%	77%
390	47%	42%	450	78%	62%
391	42%	39%	451	79%	35%
392	27%	0%	452	82%	38%
393	14%	5%	453	81%	41%
394	14%	14%	454	79%	37%
395	24%	54%	455	78%	35%
396	60%	90%	456	78%	38%
397	53%	66%	457	78%	46%
398	70%	48%	458	75%	49%
399	77%	93%	459	73%	50%
400	79%	67%	460	79%	58%
401	46%	65%	461	79%	71%
402	69%	98%	462	83%	44%
403	80%	97%	463	53%	48%
404	74%	97%	464	40%	48%
405	75%	98%	465	51%	75%
406	56%	61%	466	75%	72%
407	42%	0%	467	89%	67%
408	36%	32%	468	93%	60%
409	34%	43%	469	89%	73%
410	68%	83%	470	86%	73%
411	102%	48%	471	81%	73%
412	62%	0%	472	78%	73%
413	41%	39%	473	78%	73%
414	71%	86%	474	76%	73%
415	91%	52%	475	79%	73%
416	89%	55%	476	82%	73%

477	86%	73%	537	76%	45%
478	88%	72%	538	76%	30%
479	92%	71%	539	80%	14%
480	97%	54%	540	71%	18%
481	73%	43%	541	71%	14%
482	36%	64%	542	71%	11%
483	63%	31%	543	65%	2%
484	78%	1%	544	31%	26%
485	69%	27%	545	24%	72%
486	67%	28%	546	64%	70%
487	72%	9%	547	77%	62%
488	71%	9%	548	80%	68%
489	78%	36%	549	83%	53%
490	81%	56%	550	83%	50%
491	75%	53%	551	83%	50%
492	60%	45%	552	85%	43%
493	50%	37%	553	86%	45%
494	66%	41%	554	89%	35%
495	51%	61%	555	82%	61%
496	68%	47%	556	87%	50%
497	29%	42%	557	85%	55%
498	24%	73%	558	89%	49%
499	64%	71%	559	87%	70%
500	90%	71%	560	91%	39%
501	100%	61%	561	72%	3%
502	94%	73%	562	43%	25%
503	84%	73%	563	30%	60%
504	79%	73%	564	40%	45%
505	75%	72%	565	37%	32%
506	78%	73%	566	37%	32%
507	80%	73%	567	43%	70%
508	81%	73%	568	70%	54%
509	81%	73%	569	77%	47%
510	83%	73%	570	79%	66%
511	85%	73%	571	85%	53%
512	84%	73%	572	83%	57%
513	85%	73%	573	86%	52%
514	86%	73%	574	85%	51%
515	85%	73%	575	70%	39%
516	85%	73%	576	50%	5%
517	85%	72%	577	38%	36%
518	85%	73%	578	30%	71%
519	83%	73%	579	75%	53%
520	79%	73%	580	84%	40%
521	78%	73%	581	85%	42%
522	81%	73%	582	86%	49%
523	82%	72%	583	86%	57%
524	94%	56%	584	89%	68%
525	66%	48%	585	99%	61%
526	35%	71%	586	77%	29%
527	51%	44%	587	81%	72%
528	60%	23%	588	89%	69%
529	64%	10%	589	49%	56%
530	63%	14%	590	79%	70%
531	70%	37%	591	104%	59%
532	76%	45%	592	103%	54%
533	78%	18%	593	102%	56%
534	76%	51%	594	102%	56%
535	75%	33%	595	103%	61%
536	81%	17%	596	102%	64%

597	103%	60%	657	79%	71%
598	93%	72%	658	78%	71%
599	86%	73%	659	81%	70%
600	76%	73%	660	83%	72%
601	59%	49%	661	84%	71%
602	46%	22%	662	86%	71%
603	40%	65%	663	87%	71%
604	72%	31%	664	92%	72%
605	72%	27%	665	91%	72%
606	67%	44%	666	90%	71%
607	68%	37%	667	90%	71%
608	67%	42%	668	91%	71%
609	68%	50%	669	90%	70%
610	77%	43%	670	90%	72%
611	58%	4%	671	91%	71%
612	22%	37%	672	90%	71%
613	57%	69%	673	90%	71%
614	68%	38%	674	92%	72%
615	73%	2%	675	93%	69%
616	40%	14%	676	90%	70%
617	42%	38%	677	93%	72%
618	64%	69%	678	91%	70%
619	64%	74%	679	89%	71%
620	67%	73%	680	91%	71%
621	65%	73%	681	90%	71%
622	68%	73%	682	90%	71%
623	65%	49%	683	92%	71%
624	81%	0%	684	91%	71%
625	37%	25%	685	93%	71%
626	24%	69%	686	93%	68%
627	68%	71%	687	98%	68%
628	70%	71%	688	98%	67%
629	76%	70%	689	100%	69%
630	71%	72%	690	99%	68%
631	73%	69%	691	100%	71%
632	76%	70%	692	99%	68%
633	77%	72%	693	100%	69%
634	77%	72%	694	102%	72%
635	77%	72%	695	101%	69%
636	77%	70%	696	100%	69%
637	76%	71%	697	102%	71%
638	76%	71%	698	102%	71%
639	77%	71%	699	102%	69%
640	77%	71%	700	102%	71%
641	78%	70%	701	102%	68%
642	77%	70%	702	100%	69%
643	77%	71%	703	102%	70%
644	79%	72%	704	102%	68%
645	78%	70%	705	102%	70%
646	80%	70%	706	102%	72%
647	82%	71%	707	102%	68%
648	84%	71%	708	102%	69%
649	83%	71%	709	100%	68%
650	83%	73%	710	102%	71%
651	81%	70%	711	101%	64%
652	80%	71%	712	102%	69%
653	78%	71%	713	102%	69%
654	76%	70%	714	101%	69%
655	76%	70%	715	102%	64%
656	76%	71%	716	102%	69%

717	102%	68%	777	84%	42%
718	102%	70%	778	48%	7%
719	102%	69%	779	48%	6%
720	102%	70%	780	48%	6%
721	102%	70%	781	48%	7%
722	102%	62%	782	48%	6%
723	104%	38%	783	48%	7%
724	104%	15%	784	67%	21%
725	102%	24%	785	105%	59%
726	102%	45%	786	105%	96%
727	102%	47%	787	105%	74%
728	104%	40%	788	105%	66%
729	101%	52%	789	105%	62%
730	103%	32%	790	105%	66%
731	102%	50%	791	89%	41%
732	103%	30%	792	52%	5%
733	103%	44%	793	48%	5%
734	102%	40%	794	48%	7%
735	103%	43%	795	48%	5%
736	103%	41%	796	48%	6%
737	102%	46%	797	48%	4%
738	103%	39%	798	52%	6%
739	102%	41%	799	51%	5%
740	103%	41%	800	51%	6%
741	102%	38%	801	51%	6%
742	103%	39%	802	52%	5%
743	102%	46%	803	52%	5%
744	104%	46%	804	57%	44%
745	103%	49%	805	98%	90%
746	102%	45%	806	105%	94%
747	103%	42%	807	105%	100%
748	103%	46%	808	105%	98%
749	103%	38%	809	105%	95%
750	102%	48%	810	105%	96%
751	103%	35%	811	105%	92%
752	102%	48%	812	104%	97%
753	103%	49%	813	100%	85%
754	102%	48%	814	94%	74%
755	102%	46%	815	87%	62%
756	103%	47%	816	81%	50%
757	102%	49%	817	81%	46%
758	102%	42%	818	80%	39%
759	102%	52%	819	80%	32%
760	102%	57%	820	81%	28%
761	102%	55%	821	80%	26%
762	102%	61%	822	80%	23%
763	102%	61%	823	80%	23%
764	102%	58%	824	80%	20%
765	103%	58%	825	81%	19%
766	102%	59%	826	80%	18%
767	102%	54%	827	81%	17%
768	102%	63%	828	80%	20%
769	102%	61%	829	81%	24%
770	103%	55%	830	81%	21%
771	102%	60%	831	80%	26%
772	102%	72%	832	80%	24%
773	103%	56%	833	80%	23%
774	102%	55%	834	80%	22%
775	102%	67%	835	81%	21%
776	103%	56%	836	81%	24%

837	81%	24%	897	81%	24%
838	81%	22%	898	81%	28%
839	81%	22%	899	81%	27%
840	81%	21%	900	81%	22%
841	81%	31%	901	81%	19%
842	81%	27%	902	81%	17%
843	80%	26%	903	81%	17%
844	80%	26%	904	81%	17%
845	81%	25%	905	81%	15%
846	80%	21%	906	80%	15%
847	81%	20%	907	80%	28%
848	83%	21%	908	81%	22%
849	83%	15%	909	81%	24%
850	83%	12%	910	81%	19%
851	83%	9%	911	81%	21%
852	83%	8%	912	81%	20%
853	83%	7%	913	83%	26%
854	83%	6%	914	80%	63%
855	83%	6%	915	80%	59%
856	83%	6%	916	83%	100%
857	83%	6%	917	81%	73%
858	83%	6%	918	83%	53%
859	76%	5%	919	80%	76%
860	49%	8%	920	81%	61%
861	51%	7%	921	80%	50%
862	51%	20%	922	81%	37%
863	78%	52%	923	82%	49%
864	80%	38%	924	83%	37%
865	81%	33%	925	83%	25%
866	83%	29%	926	83%	17%
867	83%	22%	927	83%	13%
868	83%	16%	928	83%	10%
869	83%	12%	929	83%	8%
870	83%	9%	930	83%	7%
871	83%	8%	931	83%	7%
872	83%	7%	932	83%	6%
873	83%	6%	933	83%	6%
874	83%	6%	934	83%	6%
875	83%	6%	935	71%	5%
876	83%	6%	936	49%	24%
877	83%	6%	937	69%	64%
878	59%	4%	938	81%	50%
879	50%	5%	939	81%	43%
880	51%	5%	940	81%	42%
881	51%	5%	941	81%	31%
882	51%	5%	942	81%	30%
883	50%	5%	943	81%	35%
884	50%	5%	944	81%	28%
885	50%	5%	945	81%	27%
886	50%	5%	946	80%	27%
887	50%	5%	947	81%	31%
888	51%	5%	948	81%	41%
889	51%	5%	949	81%	41%
890	51%	5%	950	81%	37%
891	63%	50%	951	81%	43%
892	81%	34%	952	81%	34%
893	81%	25%	953	81%	31%
894	81%	29%	954	81%	26%
895	81%	23%	955	81%	23%
896	80%	24%	956	81%	27%

957	81%	38%	1017	80%	41%
958	81%	40%	1018	80%	36%
959	81%	39%	1019	81%	26%
960	81%	27%	1020	86%	18%
961	81%	33%	1021	82%	35%
962	80%	28%	1022	79%	53%
963	81%	34%	1023	82%	30%
964	83%	72%	1024	83%	29%
965	81%	49%	1025	83%	32%
966	81%	51%	1026	83%	28%
967	80%	55%	1027	76%	60%
968	81%	48%	1028	79%	51%
969	81%	36%	1029	86%	26%
970	81%	39%	1030	82%	34%
971	81%	38%	1031	84%	25%
972	80%	41%	1032	86%	23%
973	81%	30%	1033	85%	22%
974	81%	23%	1034	83%	26%
975	81%	19%	1035	83%	25%
976	81%	25%	1036	83%	37%
977	81%	29%	1037	84%	14%
978	83%	47%	1038	83%	39%
979	81%	90%	1039	76%	70%
980	81%	75%	1040	78%	81%
981	80%	60%	1041	75%	71%
982	81%	48%	1042	86%	47%
983	81%	41%	1043	83%	35%
984	81%	30%	1044	81%	43%
985	80%	24%	1045	81%	41%
986	81%	20%	1046	79%	46%
987	81%	21%	1047	80%	44%
988	81%	29%	1048	84%	20%
989	81%	29%	1049	79%	31%
990	81%	27%	1050	87%	29%
991	81%	23%	1051	82%	49%
992	81%	25%	1052	84%	21%
993	81%	26%	1053	82%	56%
994	81%	22%	1054	81%	30%
995	81%	20%	1055	85%	21%
996	81%	17%	1056	86%	16%
997	81%	23%	1057	79%	52%
998	83%	65%	1058	78%	60%
999	81%	54%	1059	74%	55%
1000	81%	50%	1060	78%	84%
1001	81%	41%	1061	80%	54%
1002	81%	35%	1062	80%	35%
1003	81%	37%	1063	82%	24%
1004	81%	29%	1064	83%	43%
1005	81%	28%	1065	79%	49%
1006	81%	24%	1066	83%	50%
1007	81%	19%	1067	86%	12%
1008	81%	16%	1068	64%	14%
1009	80%	16%	1069	24%	14%
1010	83%	23%	1070	49%	21%
1011	83%	17%	1071	77%	48%
1012	83%	13%	1072	103%	11%
1013	83%	27%	1073	98%	48%
1014	81%	58%	1074	101%	34%
1015	81%	60%	1075	99%	39%
1016	81%	46%	1076	103%	11%

1077	103%	19%	1137	78%	2%
1078	103%	7%	1138	76%	34%
1079	103%	13%	1139	67%	80%
1080	103%	10%	1140	70%	67%
1081	102%	13%	1141	53%	70%
1082	101%	29%	1142	72%	65%
1083	102%	25%	1143	60%	57%
1084	102%	20%	1144	74%	29%
1085	96%	60%	1145	69%	31%
1086	99%	38%	1146	76%	1%
1087	102%	24%	1147	74%	22%
1088	100%	31%	1148	72%	52%
1089	100%	28%	1149	62%	96%
1090	98%	3%	1150	54%	72%
1091	102%	26%	1151	72%	28%
1092	95%	64%	1152	72%	35%
1093	102%	23%	1153	64%	68%
1094	102%	25%	1154	74%	27%
1095	98%	42%	1155	76%	14%
1096	93%	68%	1156	69%	38%
1097	101%	25%	1157	66%	59%
1098	95%	64%	1158	64%	99%
1099	101%	35%	1159	51%	86%
1100	94%	59%	1160	70%	53%
1101	97%	37%	1161	72%	36%
1102	97%	60%	1162	71%	47%
1103	93%	98%	1163	70%	42%
1104	98%	53%	1164	67%	34%
1105	103%	13%	1165	74%	2%
1106	103%	11%	1166	75%	21%
1107	103%	11%	1167	74%	15%
1108	103%	13%	1168	75%	13%
1109	103%	10%	1169	76%	10%
1110	103%	10%	1170	75%	13%
1111	103%	11%	1171	75%	10%
1112	103%	10%	1172	75%	7%
1113	103%	10%	1173	75%	13%
1114	102%	18%	1174	76%	8%
1115	102%	31%	1175	76%	7%
1116	101%	24%	1176	67%	45%
1117	102%	19%	1177	75%	13%
1118	103%	10%	1178	75%	12%
1119	102%	12%	1179	73%	21%
1120	99%	56%	1180	68%	46%
1121	96%	59%	1181	74%	8%
1122	74%	28%	1182	76%	11%
1123	66%	62%	1183	76%	14%
1124	74%	29%	1184	74%	11%
1125	64%	74%	1185	74%	18%
1126	69%	40%	1186	73%	22%
1127	76%	2%	1187	74%	20%
1128	72%	29%	1188	74%	19%
1129	66%	65%	1189	70%	22%
1130	54%	69%	1190	71%	23%
1131	69%	56%	1191	73%	19%
1132	69%	40%	1192	73%	19%
1133	73%	54%	1193	72%	20%
1134	63%	92%	1194	64%	60%
1135	61%	67%	1195	70%	39%
1136	72%	42%	1196	66%	56%

1197	68%	64%	1219	0%	0%
1198	30%	68%	1220	0%	0%
1199	70%	38%	1221	0%	0%
1200	66%	47%	1222	0%	0%
1201	76%	14%	1223	0%	0%
1202	74%	18%	1224	0%	0%
1203	69%	46%	1225	0%	0%
1204	68%	62%	1226	0%	0%
1205	68%	62%	1227	0%	0%
1206	68%	62%	1228	0%	0%
1207	68%	62%	1229	0%	0%
1208	68%	62%	1230	0%	0%
1209	68%	62%	1231	0%	0%
1210	54%	50%	1232	0%	0%
1211	41%	37%	1233	0%	0%
1212	27%	25%	1234	0%	0%
1213	14%	12%	1235	0%	0%
1214	0%	0%	1236	0%	0%
1215	0%	0%	1237	0%	0%
1216	0%	0%	1238	0%	0%
1217	0%	0%			
1218	0%	0%			

**PART 1065—TEST PROCEDURES AND EQUIPMENT**

65. The authority for part 1065 continues to read as follows:

Authority: 42 U.S.C. 7401-7671(q).

**Subpart A—[Amended]**

66. Section 1065.1 is amended by revising paragraphs (a) and (b)(6) to read as follows:

**§1065.1 Applicability.**

- (a) This part describes the procedures that apply to testing that we require for the following engines or for equipment using the following engines:
  - (1) Large nonroad spark-ignition engines we regulate under 40 CFR part 1048.
  - (2) Vehicles that we regulate under 40 CFR part 1051 (i.e., recreational SI vehicles) that are regulated based on engine testing. See 40 CFR part 1051 to determine which vehicles may be certified based on engine test data.
  - (3) Land-based nonroad compression-ignition engines we regulate under 40 CFR part 1039.
- (b) \* \* \*
- (6) [Reserved]  
\* \* \* \* \*

67. Section 1065.10 is amended by revising paragraph (c)(3) to read as follows:

**§1065.10 Other test procedures.**

- \* \* \* \* \*
- (c) \* \* \*
- (3) You may ask to use alternate procedures that produce measurements equivalent to those from the specified procedures. If you send us a written request showing your procedures are equivalent, and we agree that they are equivalent, we will allow you to use them. You may not use an alternate procedure until we approve them, either by: telling you directly that you may use this procedure; or issuing guidance to all manufacturers, which allows you to use the alternate procedure without additional approval. You may use the statistical procedures specified in 40 CFR 1306-07(d) to demonstrate equivalence.

**Subpart B—[Amended]**

68. Section 1065.115 is amended to read as follows:

**§ 1065.115 Exhaust gas sampling system; compression-ignition engines.**

Use the exhaust-gas sampling system specified in 40 CFR 86.1310 to measure emissions from compression-ignition nonroad engines.

**Subpart C—[Amended]**

69. Section 1065.205 is amended to read as follows:

**§1065.205 Test fuel specifications for distillate diesel fuel.**

Petroleum distillate diesel fuel used as a test fuel must meet the following specifications:

Item		ASTM Test Method No.	Type 2-D
(i) Cetane Number		D613	40-50
(ii) Cetane Index		D976	40-50
(iii) Distillation range:			
(A) IBP	/C	D86	171-204
(B) 10 pct. point	/C	D86	204-238
(C) 50 pct. point	/C	D86	243-282
(D) 90 pct. point	/C	D86	293-332
(E) EP	/C	D86	321-366
(iv) Gravity	/API	D287	32-37
(v) Total sulfur	ppm	D2622	7-15
(vi) Hydrocarbon composition:			
(A) Aromatics, minimum (Remainder shall be paraffins, naphthenes, and olefins)	pct.	D5186	10
(vii) Flashpoint, min.	/C	D93	54

(viii) Viscosity	centistokes	D445	2.0-3.2
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**Subpart D—[Amended]**

70. Section 1065.310 is amended to read as follows:

**§1065.310 CVS calibration.**

Use the procedures of 40 CFR 86.1319-90 to calibrate the CVS.

**Subpart E—[Amended]**

71. Section 1065.405 is amended by revising paragraph (b) to read as follows:

**§1065.405 Preparing and servicing a test engine.**

\* \* \* \* \*

- (b) Run the test engine, with all emission-control systems operating, long enough to stabilize emission levels.
  - (1) For SI engines, if you accumulate 50 hours of operation, you may consider emission levels stable without measurement.
  - (2) For CI engines, if you accumulate 125 hours of operation, you may consider emission levels stable without measurement.

\* \* \* \* \*

**Subpart F—[Amended]**

72. Section 1065.530 is amended by revising paragraph (b)(3)(iii) and Table 1 and adding a new Table 2 and paragraph (d) to read as follows:

**§1065.530 Test cycle validation criteria.**

\* \* \* \* \*

- (b)
  - (3)
    - (iii) For a valid test, make sure the feedback cycle’s integrated brake kilowatt-hour is within 5 percent of the reference cycle’s integrated brake kilowatt-hour. Also, ensure that the slope, intercept, standard error, and coefficient of determination meet the criteria in the following tables (you may delete individual points from the regression analyses, consistent with good engineering judgment):

Table 1 of §1065.530—  
Statistical Criteria for Validating Test Cycles for Spark-Ignition Engines

	Speed	Torque	Power
1. Slope of the regression line (m)	0.950 to 1.030	0.830 to 1.030	0.880 to 1.030.
2. Y intercept of the regression line (b)	*b* ≤ 50 rpm	*b* ≤ 5.0 percent of maximum torque from power map	*b* ≤ 3.0 percent of maximum torque from power map.
3. Standard error of the estimate of Y on X (SE)	100 rpm	15 percent of maximum torque from power map	10 percent of maximum power from power map.
4. Coefficient of determination (r <sup>2</sup> )	r <sup>2</sup> ≥ 0.970	r <sup>2</sup> ≥ 0.880	r <sup>2</sup> ≥ 0.900.

Table 2 of §1065.530—  
Statistical Criteria for Validating Test Cycles for Compression-Ignition Engines

	Speed	Torque	Power
1. Slope of the regression line (m)	0.950 to 1.030	0.830 to 1.030 (hot); 0.77 to 1.03 (cold)	0.890 to 1.030 (hot); 0.870 to 1.030 (cold).
2. Y intercept of the regression line (b)	*b* ≤ 50 rpm	*b* ≤ 20 Nm or *b* ≤ 2.0 percent of maximum torque from power map, whichever is greater	*b* ≤ 4.0 kW or *b* ≤ 3.0 percent of maximum torque from power map, whichever is greater.
3. Standard error of the estimate of Y on X (SE)	100 rpm	13 percent of maximum torque from power map	8 percent of maximum power from power map.
4. Coefficient of determination (r <sup>2</sup> )	r <sup>2</sup> ≥ 0.970	r <sup>2</sup> ≥ 0.880 (hot); r <sup>2</sup> ≥ 0.850 (cold);	r <sup>2</sup> ≥ 0.910 (hot); r <sup>2</sup> ≥ 0.850 (cold).

\* \* \* \* \*

(d) Transient testing with constant-speed engines. For constant-speed engines with installed governor operating over a transient duty cycle, the test cycle validation criteria in this section apply to engine-torque values but not engine-speed values.

**Subpart G—[Amended]**

73. Section 1065.615 is amended by revising paragraphs (c) and (d) to read as follows:

**§1065.615 Bag sample calculations.**

\* \* \* \* \*

- (c) Calculate total brake work (kW-hr) done during the emissions sampling period of each segment or mode and then weight it by the applicable test cycle weighting factors.
- (d) Calculate emissions in g/kW-hr by dividing the total weighted mass emission rate (g/test) by the total cycle-weighted brake work for the test.

\* \* \* \* \*

74. Section 1065.620 is added to read as follows:

**§1065.620 Continuous sample analysis and calculations.**

Use the sample analysis procedures and calculations of 40 CFR subpart N for continuous samples.

**Subpart H—[Amended]**

75. Section 1065.701 is added to read as follows:

**§ 1065.701 Particulate measurements.**

Use the particulate sampling system and procedures specified in 40 CFR part 86 subpart N to measure particulate emissions from compression-ignition nonroad engines.

**Subpart J—[Amended]**

76. Section 1065.910 is amended to read as follows:

**§1065.910 Measurement accuracy and precision.**

Measurement systems used for field testing have accuracy and precision comparable to those of dynamometer testing. Measurement systems that conform to the provisions of §§1065.915 through 1065.950 are deemed to be in compliance with the accuracy and precision requirements of paragraph of this section. If you other field testing measurement systems you need to have documentation indicating that it is comparable to a dynamometer system.

- (a) The two systems must be calibrated independently to NIST traceable standards or equivalent national standards for this comparison. We may approve the us of other standards. Calculations of emissions results for this test should be consistent with the field testing data reduction scheme for both the in-use equipment and the dynamometer equipment, and each complete test cycle will be considered one “summing interval”, Si as defined in the field-testing data reduction scheme.
- (b) While other statistical analyses may be acceptable, we recommend that the comparison be based on a minimum of seven (7) repeats of collocated and simultaneous tests. Perform this comparison over the applicable steady-state and transient test cycles using an engine that is fully warmed up such that its coolant temperature is thermostatically controlled.

If there is no applicable transient test cycle, use the applicable steady-state cycle. Anyone who intends to submit an alternative comparison is encouraged to first contact EPA Office of Transportation and Air Quality, Assessment and Standards Division to discuss the applicant's intended statistical analysis. The Division may provide further guidance specific to the appropriate statistical analysis for the respective application.

- (c) The following statistical tests are suggested. If the comparison is paired, it must demonstrate that the alternate system passes a two-sided, paired t-test. If the test is unpaired, it must demonstrate that the alternate system passes a two-sided, unpaired t-test. The average of these tests for the reference system must return results less than or equal to the applicable emissions standard. The t-test is performed as follows, where "n" equals the number of tests:
- (1) Calculate the average of the in-use system results; this is  $I_{avg}$ .
  - (2) Calculate the average of the results of the system to which the in-use system was Referenced; this is  $R_{avg}$ .
  - (3) Calculate the "n-1" standard deviations for the in-use and reference averages; these are  $I_{sd}$  and  $R_{sd}$  respectively. Form the F ratio:  $F = (I_{sd}/R_{sd})^2$ . F must be less than the critical F value,  $F_{crit}$  at a 95% confidence interval for "n-1" degrees of freedom. Table 1 of this section lists 95% confidence interval  $F_{crit}$  values for n-1 degrees of freedom. Note that  $n_A$  represents the number of alternate system samples, while  $n_R$  represents the number of reference system samples.
  - (4) For an unpaired comparison, calculate the t-value:  

$$t_{unpaired} = (I_{avg} - R_{avg}) / ((I_{sd}^2 + R_{sd}^2) / n)^{1/2}$$
  - (5) For a paired comparison, calculate the "n-1" standard deviation (squared) of the differences,  $d_i$ , between the paired results, where "i" represents the  $i^{th}$  test of n number of tests:  

$$S_D^2 = (Sd_i^2 - ((Sd_i)^2/n))/(n-1)$$
  - (6) For a paired comparison, calculate the t-value:  

$$t_{paired} = (I_{avg} - R_{avg}) / (S_D^2/n)^{1/2}$$
  - (d) The absolute value of t must be less than the critical t value,  $t_{crit}$  at a 95% confidence interval for "n-1" degrees of freedom. Table 2 of this section lists 95% confidence interval  $t_{crit}$  values for n-1 degrees of freedom.

Table 2 of §1065.910	
n-1	t <sub>crit</sub>
6	2.45
7	2.36
8	2.31
9	2.26
10	2.23
11	2.20
12	2.18
13	2.16
14	2.14
15	2.13
16	2.12
17	2.11
18	2.10
19	2.09
20	2.09

**PART 1068— GENERAL COMPLIANCE PROVISIONS FOR NONROAD PROGRAMS**

77. The authority for part 1068 continues to read as follows:

Authority: 42 U.S.C. 7401 - 7671(q).

**Subpart A—[Amended]**

78. Section 1068.1 is amended by revising paragraphs (a) and (b)(5), and adding paragraph (e) to read as follows:

**§1068.1 Does this part apply to me?**

- (a) The provisions of this part apply to everyone with respect to the following engines and to equipment using the following engines (including owners, operators, parts manufacturers, and persons performing maintenance).
  - (1) Large nonroad spark-ignition engines we regulate under 40 CFR part 1048.
  - (2) Recreational SI engines and vehicles that we regulate under 40 CFR part 1051 (such as snowmobiles and off-highway motorcycles).
  - (3) Land-based nonroad diesel engines that we regulate under 40 CFR part 1039.
- (b) \* \* \*
  - (5) [Reserved]
  - \* \* \* \* \*
- (e) (1) The provisions of §§1068.30, 1068.310, and 1068.320 apply for stationary spark-ignition engines beginning January 1, 2004, and for stationary compression-ignition engines beginning January 1, 2006.
  - (2) The provisions of §§1068.30 and 1068.235 apply for the types of engines listed in paragraph (a) of this section beginning January 1, 2004, where they are used solely for competition.

79. Section 1068.27 is added to read as follows:

**§1068.27 May EPA conduct testing with my production engines?**

If we request it, you must make a reasonable number of production-line engines available for a reasonable time so we can test or inspect them for compliance with the requirements of this chapter.

80. Section 1068.30 is amended by adding in alphabetical order a definition of “Aftertreatment” to read as follows:

**§1068.30 What definitions apply to this part?**

\* \* \* \* \*

Aftertreatment means relating to any system, component, or technology mounted downstream of the exhaust valve or exhaust port whose design function is to reduce exhaust emissions.

\* \* \* \* \*

**Subpart B—[Amended]**

81. Section 1068.101 is amended by revising paragraph (a)(1) and adding paragraph (b)(6) to read as follows:

**§1068.101 What general actions does this regulation prohibit?**

(a) \* \* \*

(1) You may not sell, offer for sale, or introduce or deliver into commerce in the United States or import into the United States any new engine or equipment after emission standards take effect for that engine or equipment, unless it has a valid certificate of conformity for its model year and the required label or tag. You also may not take any of the actions listed in the previous sentence with respect to any equipment containing an engine subject to this part's provisions, unless the engine has a valid and appropriate certificate of conformity and the required engine label or tag. For purposes of this paragraph (a)(1), an appropriate certificate of conformity is one that applies for the same model year as the model year of the equipment (except as allowed by §1068.105(a)), covers the appropriate category of engines (such as locomotive or CI marine), and conforms to all requirements specified for equipment in the standard-setting part. This requirements of this paragraph (a)(1) also cover new engines you produce to replace an older engine in a piece of equipment, unless the engine qualifies for the replacement-engine exemption in §1068.240. We may assess a civil penalty up to \$31,500 for each engine in violation.

\* \* \* \* \*

(b) \* \* \*

(6) You must meet your obligation to honor your emission-related warranty under §1068.115 and to fulfill any applicable responsibilities to recall engines under §1068.505. Failure to meet these obligations is prohibited. We may assess a civil penalty up to \$31,500 for each engine in violation.

\* \* \* \* \*

82. Section 1068.105 is amended by adding introductory text and revising paragraph (c) to read as follows:

**§1068.105 What other provisions apply to me specifically if I manufacture equipment needing certified engines?**

This section describes general provisions that apply to equipment manufacturers. See the standard-setting part for any requirements that apply for certain applications.

\* \* \* \* \*

(c) Attaching a duplicate label. If you obscure the engine's label, you must do four things to avoid violating §1068.101(a)(1):

(1) Send a request for duplicate labels in writing with your company's letterhead to the engine manufacturer. Include the following information in your request:

(i) Identify the type of equipment and the specific engine and equipment models needing duplicate labels.

(ii) Identify the engine family (from the original engine label).

(iii) State the reason that you need a duplicate label for each equipment model.

- (iii) Identify the number of duplicate labels you will need.
  - (2) Permanently attach the duplicate label to your equipment by securing it to a part needed for normal operation and not normally requiring replacement. Make sure an average person can easily read it.
  - (3) Destroy any unused duplicate labels if you find that you will not need them.
  - (4) Keep the following records for at least eight years after the end of the model year identified on the engine label:
    - (i) Keep a copy of your written request.
    - (ii) Keep drawings or descriptions that show how you apply the duplicate labels to your equipment.
    - (iii) Maintain a count of duplicate labels that you use or destroy.
- \* \* \* \* \*

**Subpart C— [Amended]**

83. Section 1068.210 is amended by revising paragraph (a) to read as follows:

**§1068.210 What are the provisions for exempting test engines?**

- (a) We may exempt engines that are not exempted under other sections of this part that you will use for research, investigations, studies, demonstrations, or training. This may include engines placed into service if the primary purpose is to develop a fundamentally new emission-control technology related either to an alternative fuel or an aftertreatment device.
- \* \* \* \* \*

84. Section 1068.215 is amended by revising paragraph (c)(3)(iii) to read as follows:

**§1068.215 What are the provisions for exempting manufacturer-owned engines?**

- (c) \* \* \*
  - (3) \* \* \*
  - (iii) Engine displacement, engine family identification (as applicable), and model year of the engine or whom to contact for further information.
- \* \* \* \* \*

85. Section 1068.220 is amended by revising paragraph (e)(3) to read as follows:

**§1068.220 What are the provisions for exempting display engines?**

- (e) \* \* \*
  - (3) Engine displacement, engine family identification (as applicable), and model year of the engine or whom to contact for further information.
- \* \* \* \* \*

**Subpart D—Imports**

86. Section 1068.310 is amended by revising the introductory text and paragraphs (a) and (b) to read as follows:

**§1068.310 What are the exclusions for imported engines?**

Engines or equipment that are not subject to our emission standards are not subject to the restrictions on imports in §1068.301(b). If you show us that your engines qualify under one of the paragraphs of this section, we will approve your request to import such excluded engines. You must have our approval to import an engine under paragraph (a) of this section. You may, but are not required to request our approval to import the engines under paragraph (b) or (c) of this section. The following engines are excluded:

- (a) Engines used solely for competition. Engines you use solely for competition are generally excluded from the restrictions on imports in §1068.301(b), but only if they are properly labeled according to §1068.320. The standard-setting part may set special provisions for the manufacture, sale, or import of engines used solely for competition. Section 1068.101(b)(4) prohibits using these excluded engines for other purposes.
- (b) Stationary engines. The definition of nonroad engine in 40 CFR 1068.30 does not include certain engines used in stationary applications. Such engines are not subject to the restrictions on imports in §1068.301(b), but only if they are properly labeled according to §1068.320. Section 1068.101 restricts the use of stationary engines for non-stationary purposes.

\* \* \* \* \*

87. Section 1068.315 is amended by revising introductory text and paragraph (a) and adding paragraph (f)(1)(iii) to read as follows:

**§1068.315 What are the permanent exemptions for imported engines?**

We may approve a permanent exemption from the restrictions on imports under §1039.301(b) under the following conditions:

- (a) National security exemption. You may an import engine under the national security exemption in §1068.225, but only if they are properly labeled according to §1068.320.  
\* \* \* \* \*
- (f) \* \* \*
- (1) \* \* \*
- (iii) Land-based nonroad diesel engines (see part 1039 of this chapter).  
\* \* \* \* \*

88. Section 1068.320 is amended by revising the section heading, paragraph (a) introductory text, and paragraph (b)(4) to read as follows:

**§1068.320 How must I label an imported engine with an exclusion or a permanent exemption?**

- (a) For engines imported under §1068.310(a) or (b) or §1068.315 (a), you must place a permanent label or tag on each engine. If no specific label requirements from the

standard-setting part or from subpart C of this part apply, you must meet the following requirements:

\* \* \* \* \*

(b)

\* \* \*

(4) State: "THIS ENGINE IS EXEMPT FROM THE REQUIREMENTS OF [identify the part referenced in 40 CFR 1068.1(a) that would otherwise apply], AS PROVIDED IN [identify the paragraph authorizing the exemption (for example, "40 CFR 1068.315(a)")]. INSTALLING THIS ENGINE IN ANY DIFFERENT APPLICATION MAY BE A VIOLATION OF FEDERAL LAW SUBJECT TO CIVIL PENALTY.".

\* \* \* \* \*

89. Section 1068.325 is amended by revising the introductory text to read as follows:

**§1068.325 What are the temporary exemptions for imported engines?**

If we approve a temporary exemption from the restrictions on importing an engine under §1039.301(b), you may import it under the conditions in this section. We may ask the U.S. Customs Service to require a specific bond amount to make sure you comply with the requirements of this subpart. You may not sell or lease one of these engines while it is in the United States. You must eventually export the engine as we describe in this section unless you get a certificate of conformity for it or it qualifies for one of the permanent exemptions in §1068.315. Section 1068.330 specifies an additional temporary exemption allowing you to import certain engines you intend to sell or lease.

\* \* \* \* \*

90. A new section 1068.340 is added to read as follows:

**§1068.340 What special provisions apply to Independent Commercial Importers?**

We generally consider engines to be new when they are imported into the United States, even if they have previously been used outside the country. See 40 CFR part 89, subpart G and 40 CFR 89.906(b) for special provisions allowing Independent Commercial Importers to show that such engines meet the requirements of the standard-setting part without the full certification process.

**Subpart F—[Amended]**

91. Section 1068.510 is amended by revising paragraphs (b), (c)(1), (e), (f), and (h), and adding paragraph (a)(7) to read as follows:

**§1068.501 How do I report engine defects?**

(a) \* \* \*

(7) This section distinguishes between defects and possible defect. A possible defect occurs anytime there is an indication that an emission-related component might have a defect, as described in paragraph (b)(1) of this section.

(b) Investigation of possible defects. If the number of engines that have a possible defect, as defined by paragraph (b)(1) of this section, exceed the thresholds specified in paragraph

(e) of this section, you must conduct an investigation to determine if an emission-related component is actually defective.

(1) You must track warranty claims, parts shipments, and the other information specified in paragraph (b)(1)(iii) of this section. You must classify an engine component as having a possible defect if any of the following is true:

(i) A warranty claim is submitted for the component, whether this is under your emission-related warranty or any other warranty.

(ii) You ship a replacement component other than for normally scheduled maintenance during the useful life of the engine.

(iii) You receive any other information indicating the component may be defective, such as information from dealers or hot line complaints.

(2) Your investigation must be prompt, thorough, consider all relevant information, follow scientific and engineering principles, and be designed to obtain all the information specified in paragraph (d) of this section.

(3) Your investigation only needs to consider possible defects that occur within the useful life period, or within five years after the end of the model year, whichever is longer.

(4) You must continue your investigation until you are able to show that components are not defective or you obtain all the information specified for a defect report in paragraph (d) of this section. Send us an updated defect report anytime you have significant additional information.

(5) If a component with a possible defect is used in additional engine families or model years, you must investigate whether the component or part may be defective when used in these additional engine families or model years, and include these results in any defect report you send under paragraph (c) of this section.

(6) If your initial investigation concludes that the number of engines with a defect is fewer than the thresholds specified in paragraph (f) of this section, but other information later becomes available that may show that the number of engines with a defect exceeds these thresholds, then you must resume your investigation. If you resume an investigation, you must include the information from the earlier investigation to determine whether to send a defect report.

(c) \* \* \*

(1) Your investigation shows that the number of engines with a defect exceeds the thresholds specified in paragraph (f) of this section. Send the defect report within 15 days after the date you identify this number of defective engines. See paragraph (h) of this section for reporting requirements that apply if the number of engines with a defect does not exceed the thresholds in paragraph (f) of this section.

\* \* \* \* \*

(e) Thresholds for conducting a defect investigation. Unless the standard-setting part specifies otherwise, you must begin a defect investigation based on the following threshold values:

(1) For engine with rated power under 560 kW:

(i) When the component is a catalytic converter (or other aftertreatment device), for one of the following number of engines that may have the defect:

(A) For engine families with annual sales below 4,000 units: 20 or more engines.

(B) For engine families with annual sales between 4,000 and 100,000 units: more than 2 percent of the total number of engines in the engine family.

(C) For engine families with annual sales above 100,000 units: 2,000 or more engines.

(ii) When the emission-related component is anything but a catalytic converter (or other aftertreatment device), for one of the following number of engines that may have the defect:

(A) For engine families with annual sales below 4,000 units: 40 or more engines.

(B) For engine families with annual sales between 4,000 and 100,000 units: more than 4 percent of the total number of engines in the engine family.

(C) For engine families with annual sales above 100,000 units: 4,000 or more engines.

(2) For engine with rated power greater than or equal to 560 kW, if the number of engines in an engine family that may have the defect exceeds 1 percent of the total number of engines in the engine family or 5 engines, whichever is greater.

(f) Thresholds for filing a defect report. You must send a defect report based on the following threshold values:

(1) For engine with rated power under 560 kW:

(i) When the component is a catalytic converter (or other aftertreatment device), for one of the following number of engines that may have the defect:

(A) For engine families with annual sales below 4,000 units: 5 or more engines.

(B) For engine families with annual sales between 4,000 and 100,000 units: more than 0.125 percent of the total number of engines in the engine family.

(C) For engine families with annual sales above 100,000 units: 125 or more engines.

(ii) When the emission-related component is anything but a catalytic converter (or other aftertreatment device), for one of the following number of engines that may have the defect:

(A) For engine families with annual sales below 4,000 units: 10 or more engines.

(B) For engine families with annual sales between 4,000 and 100,000 units: more than 0.250 percent of the total number of engines in the engine family.

(C) For engine families with annual sales above 100,000 units: 250 or more engines.

(2) For engine with rated power greater than or equal to 560 kW, if the number of engines in an engine family that has the defect exceeds 0.5 percent of the total number of engines in the engine family or 2 engines, whichever is greater.

\* \* \* \* \*

(h) Investigation reports. If you investigate possible defects under paragraph (b) of this section and find that the number of engines with a defect does not exceed the thresholds

specified in paragraph (f) of this section, you must send us a report supporting this conclusion. Include the information specified in paragraph (d) of this section, or explain why the information is not relevant. Send this report within 15 days after the date you reach this conclusion.

\* \* \* \* \*